

The VALLEY HAM NEWS

The Voice of the Yuba Sutter Amateur Radio Club
A California Non-profit Organization

E-Mail: ysarc@cwnet.com

Web Page: <http://users.cwnet.com/ysarc/>

P.O. Box 1169
Yuba City, California 95992

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Editor: Curtis R Sylvester-José, KF6VFP
12472 Krosens Road, Marysville, CA 95901
Telephone 530-743-3003
E-Mail: curtsj@yuba.net

Webmaster: Mike Colvin, KB0MJ
1221 I Street, Marysville, CA 95901
Telephone: 530-632-8080
E-Mail: KB0MJ@arrl.net

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NEXT BOARD MEETING

The next Board Meeting will occur on July 13 at the Kalico Kitchen in Live Oak. The time is 8:30AM. The board Meeting will follow breakfast.

Bring your suggestions, gripes and offers to help as well as your appetite.

NEXT CLUB MEETING

The next regular club meeting and annual picnic will occur on Saturday, August 10, at Pete Visalli's home in Dobbins.

This will be a barbeque. Bring your own meat to cook and a dish to share. The club will furnish coffee and sodas; you bring your own table service (plate, cup, silverware, etc.) as well as your favorite dish to share.

Be there at 1200 or later.

Pete has a large barbeque pit, picnic tables and everything else you'll need, just like going to a public park. Last year everyone had a great time.

Emergency Responder Kit

This is the first of what I hope to be a series of articles about how different members use the amateur bands. Myself, I am a preparedness nut. I believe in be prepared as much as possible. Getting a ham license as an alternate means of communication was/is a natural extension of this.

Many hams help out during emergencies by providing an alternate means for police, fire, Red Cross, Salvation Army, etc. to communicate. Besides their radios, spare batteries, antennas, and expertise, connectors, cable etc. what types of things should be in their responder kit. Here's what I have as an emergency evacuation kit (72-

hour kit) that could become a part of a responders kit. Adapt yours to fit your needs.

72-hour Kit

- 1 Pack, Suitcase, or Duffle Bag
- 1-2 Changes of Clothes
- 1 Space Blanket and/or Sleeping Bag
- 1 Tube Tent or Single Person Tent.
- 1 Tri-fold Shovel
- 1 Swiss Army Knife
- 3 Boxes Windproof/Waterproof Matches
- 1 Pocket/Wire Saw
- 1 Magnesium Fire Starter
- 1 Portable Stove
- 1 Box Fire Starters
- 1 Btl. Water Purification Tablets
- 1 Water Filter Kit
- 1 5-gallon Water Bag
- 1 Cook Kit
- 1 Cooking Utensils
- 1 Eating Utensils
- 1 Flashlights
- 4-6 Code Red Batteries
- 1 Candle Lantern
- 3 9-hour Candles
- 1 Signal Mirror
- 1 Compass (Silva)
- 1 Whistle, Storm®
- 50 ft. Parachute cord
- 1 SAM Splint
- 6 Light Sticks
- 1 First Aid Kit
- 3-day supply freeze dried foods or other foods such as MREs.
- 1 BG Survival Candy
- 1 Male/Female Grooming Kit
- 1 Phone Change
 - 10 nickels
 - 10 dimes
 - 10 quarters
- 1 Emergency Funds
 - 10 \$1.00
 - 10 \$5.00
 - 10 \$10.00
 - 10 \$20.00
- 1 Poncho

Code Red Batteries are a D-size battery that can be stored for 10 years on the shelf without losing their power. When ready to use, give the cap a twist and the chemicals will mix giving you a usable battery. They can be purchased through Nitro-Pak, Inc.; 151 N. Main St. Heber City, UT 84032; phone 1-800-866-4876

A Storm® Whistle is a type of whistle that can be heard up to 2 miles away. They can be found in local sporting goods stores or purchased through Nitro-Pak.

A couple of other items to consider adding to your responder kit are an extension cord and power strip for use with your equipment.

Now, chances are you'll never have to use this kit. However, the

ARRL's *Amateur Radio Emergency Communications Course, Level II* recommends a small lightweight emergency kit to carry you over until supplies arrive. The American Red Cross or Salvation Army supplies a place to sleep and food for emergency workers. The ARRL in their *Emergency Communications course*

recommends at least a one day supply of food and water since the emergency workers will have first access to food and water on the basis that they must be "fueled" if they are to assist victims. Nevertheless, it doesn't hurt to "Be Prepared," as an emergency responder or for your own needs in an emergency, major or minor.

The above kit is helpful. It gives you a basis to start with. However, like most things, it's useless unless you know how to use the items. Take a first aid course, go camping and practice using your kits and supplies.

For more information look in the following books:

- Amateur Radio Emergency Communications Course, Level II*, ARRL.
- When the Big One Hits: A Survival Guide*

Upcoming Events

July 13 at 0830 Breakfast and board meeting at Kalico Kitchen in Live Oak

July 20 at 0900 VEC Testing session. First Free Evangelical Church at the corner of Clarke and King Streets in Yuba City.

August 10 at 1200 Annual picnic at Pete Visali's (W6HKB) home

for *Amateur Radio Operators*, Boyd, Jerry (K6BZ) and Jay (KN6BP). Published by World Radio Books, 1993.

72-Hour Emergency Kit, Barry Crockett.

Emergency Survival Packs, Blair D. Jaynes.

Curtis (KF6VFP)

Updates to Roster

Larry Jones' (K6BLL) correct email address is l.jones2@ssss.com.

Tom Nelson's (W6EO) correct email is tnelson@dcn.davis.ca.us.

Bernie's (WB6PFH) email address should be all lowercase, mr880@juno.com.

Terry Graf (WA6OBC) is an extra class amateur and a member of the ARRL.

Berry Barnes' (KE6LOW) new email address is bbarnes29@attbi.com.

Carl R McGregor (KE6VUC) may not have been listed on the name roster (at least he is not on my Excel spreadsheet of the name roster).

NEXT VE EXAMS COMING SOON

The next VE Exam session is Saturday, **July 20**, at the Evangelical Free Church in Yuba City starting at the usual time of 9:00AM.

Beginning with this session, those testing for Extra Class will use the new pool questions.

If you are going to test, please pre-register with Clara Ansley (KF6JPP).

TECH NOTES

This month's tech notes is the first of several parts about grounds. Every station has a variety of grounds. You'll have a green wire safety ground at your wall outlet, perhaps a RF (radio frequency) ground for your radios, chassis ground, signal ground, and lightning

protection ground to name a few. We'll start by talking about the Green Wire Safety Ground (also called AC ground).

The AC Ground is the one found on all of your household outlets. It is also called a Green Wire Safety Ground because the wire that goes to the circular contact of the outlet has green insulation. Figure 1 shows the usual configuration found in the majority of homes. In industry it is known as a NEMA 5-15S and the matching plug as a NEMA 5-15P. NEMA stands for National Electrical Manufacturers Association and is the industry body that has developed and approved this standard. The "5" indicates which configuration this is, the "15" the maximum amperage the socket or plug can handle and the "S" and "P" indicate socket and plug respectively.

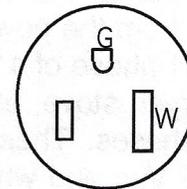


Figure 1 NEMA 5-15S

You'll note on the figure the "G" and "W." The "G" indicates which contact the green wire is attached to. The "W" indicates which contact the white (hot) wire attaches to. The remaining contact has the black (return) wire attached to it.

If you are going to install a new outlet in your ham shack, make sure you wire it as above and that the circuit meets the National Electric Code which dictates the size wires, breaker size and grounding. The table below shows how many amps different size solid copper wires can handle.

Since the plug or socket is rated at 15 amps, the wires must also be able to handle 15 amps. Hence a minimum gage wire of 12 AWG is required. If your equipment will pull more than 15 A then use a different configuration socket that is rated to handle the current. Using a different configuration prevents you from accidentally plugging in lower power equipment into hi power outlets and frying your equipment.

Table of Single Wire Size and Capacity

Wire Size (AWG)	Diameter (inches)	Current Capacity (A)
6	0.162	80
8	0.128	60
10	0.102	40
12	0.081	30
14	0.064	25
16	0.051	20
18	0.040	18

Note: AWG stands for American Wire Gauge.

If you were to take off the cover to your breaker panel you'll see 2 wires coming in and three wires going out to the outlets. The 2 incoming wires are from the power transformer and each provides 1 phase of 115 Vac. To get 220 Vac for your dryer, stove, etc. the circuit is wired across both phases. These wires are the white wires for 115 Vac and white and red for 220 Vac in your household circuits. The black and green wires are tied together at the breaker box and in turn tied to a ground rod. Some older homes might have the green and black wires tied to a water pipe. This is not a good idea since the galvanic action between the galvanized pipe and copper wire could corrode the pipe and make a hole in your pipe.

When you wire a switch in the circuit, be sure to put the switch on the hot (white) wire. While you'll be able to turn equipment off/on with a switch wired to the black (return) lead; however, in the off condition your equipment will still have 115 Vac in it. Not a good idea and can lead to some nasty shocks.

At your equipment the white and black wires provide power to the equipment with the white wire tied to the equipment switch. The green wire is tied to the chassis. This helps prevent shocks should something happen and chassis gets power shorted to it.

PARTNERSHIP FOR PUBLIC WARNING CALLS FOR INPUT ON NATIONAL STRATEGIC PLAN

The Partnership for Public Warning (PPW) has called for help in formulating the first National Strategic Plan for Public Warning. Public warning systems and procedures have significantly reduced the casualties and other consequences of disasters, but the effectiveness of these systems and procedures can be improved further. The continuing threat of terrorism now makes this effort a national imperative.

The first step in drafting the National Plan is to collect all relevant information and experience from people and organizations with public safety and homeland security missions and interests. It is looking for input from all individuals, agencies and organizations with public warning missions and interests.

The PPW website, www.partnershipforpublicwarning.org, has more information about the project. To submit ideas, download the information package available through the link labeled Your Input is Urgently Needed, or go directly to the page through this link.

The available information includes a Request for Information Package, Partial List of Potential Issues to Trigger Thoughts and Responses and a Request for Manufacturers Information.

(From BE Radio Currents Online - May 27 - Jun 09, 2002)

Jerry Snaper (KD6FDM)

Wordsearch

A P I K S L Y Z B S I
 P R A D I O C N G O E
 D O W D L M N G I V R
 Q P J U U K E D O A E
 E A R C T Y U I P M H
 S G D T F A Q G E H P
 J A K I L Z N T X C S
 H T G N E L E V A W O
 V I H G B R R N M Q N
 A O Z W S X F E D C O
 P N R S C A T T E R I

There are 11 words dealing with radio wave propagation hidden above. All of the words can be found in *Now You're Talking!*. Solution will be in next months newsletter. Have fun!!

BAFFLING CINCINNATI RFI CASE SOLVED

(From the ARRL website, <http://arrl.org>)

Cincinnati - May 31, 2002 - In what FCC Special Counsel for Enforcement Riley Hollingsworth called "a textbook example" of FCC-ARRL cooperation, a case of strange interference involving a power company and an AM broadcast station has been substantially resolved. As a result of their follow-up investigation, six Cincinnati-area amateur radio operators were awarded the ARRL Certificate of Merit.

In January, the FCC contacted WLW-AM, Cincinnati, and Cinergy, the electric utility serving the region, to help resolve the unusual and longstanding interference situation that was affecting local amateurs. Spurious signals associated with WLW transmissions had been monitored over a wide area and frequency range and were severely affecting some amateur bands.

The investigation focused on utility towers carrying 345kV lines in the vicinity of the WLW broadcast tower. Jay Adrick, K8CJY

(who also works for Harris Communications in Cincinnati) - a member of the amateur team involved in tracking down the problem and one of those honored by the ARRL - explained at the Dayton ARRL Forum earlier this month that the primary problem seemed to stem from static lines, conductors that are placed on the top of the electrical towers to dissipate static charges in the air, on the towers. These lines do not carry electrical power. The static lines, he pointed out, were not sufficiently RF-bonded to the tower structure but loosely fitted into a hanging bracket. "At 60Hz, it's a reasonable ground. At [radio frequencies], it's a non-linear junction," Adrick said. "What we have is the breakdown of a non-linear junction, which is a great noise generator." The result was something that sounded a bit like a spark gap modulated by WLW's audio being re-radiated by the static wires acting as a huge antenna.

Success did not come easily, and mop-up operations continue. Hollingsworth called the situation "a history-making RF interference case" that generated more investigative analysis than any other case in his years with the FCC.

Ohio ARRL Section Manager Joe Phillips, K8QOE, said the local amateurs brought the matter to the FCC's attention after working with WLW and Cinergy for almost two years to pin down the cause of the spurious signals.

At the ARRL Forum in Dayton those involved with the investigation effort were honored with certificates. The team consisted of Bob Reiff, WA8ULW; Ted Homan, WB8WFG; Herb Nichols, W3EOA; Geoff Mendenhall, W8GNM; and Paul Jellison, WD8KMX. Jellison is regional engineering manager of Clear Channel Communications, which owns WLW. Also honored were non-amateurs Jeff Antoni and Kelly McMahan, both of Cinergy.

The certificates were signed by ARRL Great Lakes Division Director George Race, WB8BGY, and ARRL Lab Supervisor Ed Hare, W1RFI, who assisted in the efforts to resolve the interference situation. The amateurs were cited for "creating an example of longtime and continuing corporate-amateur radio cooperation in an interference abatement of high power RF signals."

Though some interference remains, Phillips said, the local amateurs and both corporations discovered many possible sources of trouble and have established a working procedure for clearing these sources.

"Saying the interference is all cleared up would be foolhardy given the complex nature of the engineering involved," said Phillips, who recommended the awards, "but the two words that describe this historic work would be 'patience works.'"

Under FCC Part 15 and Part 73 rules, incidental noise radiated by power company equipment or spurious emissions from a broadcast transmitter must be corrected if they cause harmful interference to radio communications.

Jerry Snaper (KD6FDM).

like to see in it please let me know. I can usually be easily reached on the Monday Night Net, or email or call me at the phone number and email address listed above.

Until next month — —^{ooo ooo} — —'s.
Curtis (KF6VFP)

TRIVIA

To estimate your CW speed when you have a fairly balance ratio of dots to dashes of 2:1 (typical ratio) count the number of dashes in 5 seconds. The result will be approximately your CW speed in words per minute.

Roy (K6ZU).

EDITOR'S RAMBLINGS

Well, my daughter is off to Germany with her high school class for the next few weeks. She is staying with a local family there. Me, I'll be off to work in Washington state later this month and will be back the first of September.

Speaking of which, any volunteers to act as net control on Monday Nights while I am gone?

Hope you like the articles in this months newsletter and find them informative. Next month Mike Colvin (KB0MJ) will be writing an article his use of amateur radio in school. I'll also try to do another Tech Note and a puzzle of some type.

This newsletter is yours. If you have something you would like to submit or would