



August, 2014

Accurate, Reliable Emergency Communications for our Community

Volume 14, Number 8

The Amateur Radio Parity Act

The ARRL Letter

Editor's Soapbox: If you think, "I already have an external antenna. This doesn't affect me." You couldn't be more wrong! Every time an Amateur anywhere is not allowed to install a reasonable exterior antenna, it affects ALL Amateurs. It always takes at least two parties to communicate. In an emergency, repeaters will most likely not be usable. This means simplex communications which are a lot more reliable with an outside antenna. Effective HF communications require an external antenna as well. Write your Congressman in support of this bill. Do it today!

Initial efforts to secure additional co-sponsors for "The Amateur Radio Parity Act of 2014" - H.R. 4969 - are starting to produce results. As of August 5, 17 co-sponsors had signed onto the bill, which was introduced in the US House of Representatives with bipartisan support in late June. Additional co-sponsors are anticipated. H.R. 4969 would call on the FCC to apply the "reasonable accommodation" three-part test of the PRB-1 federal pre-emption policy to private land-use restrictions regarding antennas. The bill's primary sponsor is Rep Adam Kinzinger (R-IL). It received initial co-sponsorship from Rep Joe Courtney (D-CT), who attended the ARRL National Centennial Convention on July 19 to discuss the measure with visitors and League officials.

"With Congress on break for August, we are encouraging our members to meet with their representatives while [lawmakers] are home on break in their districts, and urge their support for H.R. 4969," said ARRL Regulatory Information Manager Dan Henderson, N1ND. "We're very pleased with the initial response, but the more noise we make, the better our chances." He emphasized that a successful outcome requires as many co-sponsors as possible, and that's where ARRL members come



into play in their role as voters and constituents.

The League's H.R. 4969 page contains information and guidance for clubs and individuals promoting efforts to gain co-sponsors for the measure by contacting their members of Congress. The web page includes a sample letter to a member of Congress and a list of "talking points." For in-person visits, the League recommends organizing small teams of knowledgeable, articulate radio amateurs to approach lawmakers one to one to plead their case. You can find the webpage here: <http://www.arrl.org/hr-4969>.

The limited PRB-1 pre-emption currently applies only to state and municipal land-use ordinances. The FCC has indicated its reluctance to provide the same legal protections from private land-use agreements — often called covenants, conditions, and restrictions or CC&Rs — without direction from Congress. H.R. 4969 has been referred to the House Energy and Commerce Committee. Rep Greg Walden, W7EQI (R-OR), chairs that panel's Communications and Technology Subcommittee, which will consider the measure. The League had approached Walden, who helped to engineer the bill.

Henderson said that in response to the "Get Behind H.R. 4969" effort at the Centennial Convention and last month's edition of the *Legislative Update Newsletter*, more

Antenna Legislation *cont'd on page 2*

ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)
Breakfast Saturday, September 13th
Digital Monday, September 15th

ARES Nets

MN ARES Phone Net
6:00PM Sunday Freq: 3.860 mhz
ARRL MN Phone Net
12:00p, 5:30p CST Daily Freq: 3.860 mhz
ARRL MN CW Net
6:30p, 9:50p CST Daily Freq: 3.568 mhz

NETS WITH OUR NEIGHBORS

North Dakota: Daily 3.937 mhz 6:30pm
South Dakota: Daily 3.860 mhz 6:00pm
Wisconsin: Daily 3.985 mhz 5:30pm
Iowa: Daily 3.970 mhz 12:30/5:30pm

The ARES COMMUNICATOR is published for the benefit of Amateur Radio Operators in Scott County and other interested individuals.
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Reader submissions encouraged!

Antenna Legislation - cont'd from page 1

than 2000 individuals drafted letters to their congressional representatives, urging them to co-sponsor the bill. He asked League members to e-mail or mail letters directed to their US House of Representatives member to ARRL Headquarters for forwarding. E-mails will be printed beforehand, he noted. Henderson explained that this approach speeds delivery, since individual pieces of mail to members of Congress are scanned for threats. Henderson said he's already received another 200 or so letters to forward to House members.

You can check for updates on H.R. 4969 on the new Dakota Division website, in the Dakota Division News page: www.arlldakota.org/dakota-division-news

When you send an e-mail to your representative, please also send a copy to Dan Henderson at ARRL Headquarters at n1nd@arrl.org. When you email a copy of your message to ARRL, include "H.R. 4969" in your subject line. All correspondence must be signed and include your mailing address to ensure your message reaches the proper Congressman. When you do that, your letter will be printed and then a hard copy will be delivered to your representative's Washington office. Not only does this ensure that your letter gets there, but hand delivery gives us one more chance for a face-to-face dialog.

If you are able to meet with your representative personally, there is a new "leave behind" document that is a single page and much more focused than the Key Talking Points currently on the HR-4969 page: <http://www.arrl.org/hr-4969>

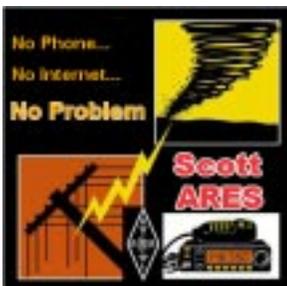
BREAK - OVER

*"Never wish life was easier,
wish that you were better."*

Jim Rohn

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Test Your NIMS Knowledge

This month we will continue our review of ICS-700a: National Incident Management System (NIMS) An Introduction. Check your recall of the course material with this question.

The Joint Information System is:

- A. The framework for organizing, integrating, and coordinating the delivery of public information.
- B. A 24/7 multiagency watch center that provides Federal prevention, protection, and preparedness coordination.
- C. The automated system used by the Situation Unit within the Planning Section to synthesize information and produce reports.
- D. A set of guidelines and protocols for sharing sensitive and classified information during an incident response.

Check next month's ARES Communicator for the solution



NBEMS Current Versions

The current version of the Fldigi manual is available at NBEMS Info page at www.scottares.org. Look under the 'Help Sheets' heading.

Be sure to check to make sure you have the current software on your thumb drive.

Now is a good time to check to your digital software to make sure you are running the newest versions. You can find the most recent versions posted at both: www.w1hkj.com/download.html and <http://www.scottares.org/NBEMS.htm>

Here are the most recent releases as of June 12, 2014.

Software	Version
Fldigi	3.21.83
Flwrap	1.3.4
Flmsg	2.0.4
Flamp	2.1.02

The Monday evening training net is a great place to have your digi questions answered and problems solved! Join the Scott ARES group on 146.535 MHz simplex at 7:00pm on Monday evenings.



BREAK - OVER

Cincy BPL RIP

A Cincinnati, Ohio, broadband-over-powerline (BPL) Internet service provider is throwing in the towel and yielding to more modern technology. Cincinnati Communications will pull the plug on its BPL system on August 1, according to a report on *The Enquirer* newspaper's Cincinnati.com website.

"The failure of the Cincinnati system will come as no surprise to anyone familiar with BPL technology," said ARRL CEO David Sumner, K1ZZ. "It's rather remarkable that they managed to keep it going this long."

Thomas Balun of Broadband Ventures LLC, which operates Cincinnati Communications, told *The Enquirer* that the company essentially would be starting over from scratch with more up-to-date technology. "The technology to subscribers' homes was really antiquated," Balun told *The Enquirer*. "We tried to figure out how to convert subscribers, but we can't do it. We have to shut the system down and start over."

The Enquirer report said Cincinnati Communications customers had endured "on-again, off-again service" with the BPL system, with some service outages lasting for days.

Balun conceded that the technology "was painfully slow," the Cincinnati.com report said, and the company plans to upgrade to an optical fiber system.

The Cincinnati system was never a significant source of interference to radio amateurs, Sumner said, because it used Current Technologies hardware. "The medium-voltage lines used low-band VHF frequencies," he explained. "The drops to homes used HF, but with the ham bands notched."

BPL is a general term that covers any technology that uses electric-utility distribution lines or on-premise power lines to conduct broadband signals for computer networking or utility smart-grid applications. Under Part 15 of the FCC rules, the use of power-company wiring to deliver Internet access or smart-grid communication to homes and businesses is called "access BPL." Access BPL that operates between 1.7 and 80 MHz has special provisions in Part 15 of the FCC's rules to control its interference potential, although the League contends that the present rules are insufficient to effectively control interference.

BREAK - OVER

July NIMS Knowledge Solution

HSPD-5 required the Secretary of Homeland Security to establish a mechanism for ensuring the ongoing management and maintenance of NIMS. The Secretary established the National Integration Center (NIC) to perform all of the following functions EXCEPT:

A. Inventorying and tracking all national resources and assets available for deployment in incidents managed using NIMS.

Take a Dip in the General Pool

Time to test your knowledge of the information covered by the General Class license exam. Each month we'll take a look at a selection from the question pool. Here is this month's sample:

1. What does the A-index indicate?
 - A. The relative position of sunspots on the surface of the Sun
 - B. The amount of polarization of the Sun's electric field
 - C. The long term stability of the Earth's geomagnetic field
 - D. The solar radio flux at Boulder, Colorado
2. How are radio communications usually affected by the charged particles that reach the Earth from solar coronal holes?
 - A. HF communications are improved
 - B. HF communications are disturbed
 - C. VHF/UHF ducting is improved
 - D. VHF/UHF ducting is disturbed
3. What usually happens to radio waves with frequencies below the Maximum Usable Frequency (MUF) and above the Lowest Usable Frequency (LUF) when they are sent into the ionosphere?
 - A. They are bent back to the Earth
 - B. They pass through the ionosphere
 - C. They are amplified by interaction with the ionosphere
 - D. They are bent and trapped in the ionosphere to circle the Earth

(Check next month's issue of the ARES Communicator for the answer.)

"Today I will do what others won't, so tomorrow I can accomplish what others can't."

Jerry Rice

July General Pool Answers

1. What effect do high sunspot numbers have on radio communications?
 - A. Long-distance communication in the upper HF and lower VHF range is enhanced
2. What does the K-index indicate?
 - A. The short term stability of the Earth's magnetic field
3. What is a reliable way to determine if the Maximum Usable Frequency (MUF) is high enough to support skip propagation between your station and a distant location on frequencies between 14 and 30 MHz?
 - A. Listen for signals from an international beacon

FEMA and ARRL Ink MOU

ARRL Letter

The ARRL and the Federal Emergency Management Agency (FEMA) have announced a Memorandum of Agreement (MOA) that will enhance cooperation between the League and FEMA in the area of disaster communication. FEMA Administrator Craig Fugate, KK4INZ, and ARRL President Kay Craigie, N3KN, signed the agreement July 18 during the ARRL National Centennial Convention in Hartford, Connecticut.

“Radio is one of the most resilient communications technologies we have,” Fugate said. “When the power is out and telecommunications are down, the Amateur Radio community can serve as a vital resource in support of emergency responders and survivors during a disaster. This MOA will strengthen FEMA’s partnership with ARRL and build upon our work to expand emergency communications capabilities and the use of Amateur Radio in emergency management.”

The new agreement will allow FEMA and ARRL to work together to provide resources, services and personnel, as available, in order to strengthen capacity in areas of emergency communications, mass care and emergency assistance, disaster preparedness, response and recovery, while also raising public awareness about the use of Amateur Radio as a public safety resource. The pact also outlines the ways in which FEMA and ARRL will cooperate to carry out their respective responsibilities, with respect to disaster mitigation, preparedness, response and recovery operations in the event of a natural or manmade disaster.

Craigie said that from radio’s earliest days of experimentation to the present, ham radio volunteers have combined a passion for technology with a devotion to assisting agencies that respond to disasters. “This combination of inventiveness and service has saved lives for a century,” she said. “We look forward to working with FEMA to further develop opportunities for trained, equipped and prepared Amateur Radio operators to serve the public interest whenever and wherever disasters affect our country and its communities.”

Fugate echoed his afternoon remarks as the keynote speaker at the ARRL National Centennial Convention Banquet Friday evening. He said that before he even became FEMA administrator, it became clear to him that Amateur Radio could support ad hoc communication without relying on conventional communication systems. “The more sophisticated our systems become, the more fragile they become,” he told the gathering of some 900 dinner guests. He again emphasized the need for resiliency in communication systems, and asked, “How many public safety networks can come close to ham radio’s bandwidth?”

“The relevancy of ham radio only grows,” he asserted. “Amateur Radio is taking that hobby and turning it into saving lives.”

LIGHTNING SAFETY

Farmers Insurance Company

Each year, lightning causes dozens of deaths, thousands of fires, and billions of dollars in property damage. It’s smart to learn as much as you can about lightning so you can take steps to protect yourself, your loved ones and your property against one of nature’s most dangerous phenomena.

Most lightning deaths and injuries in the United States occur during the summer months, when lightning strikes are more frequent and outdoor activities are at their peak², so when enjoying outdoor activities it’s important to pay attention to the weather and take appropriate actions in a timely manner when thunderstorms approach.

Did you know that:

- When it comes to lightning, rubber shoes do nothing to protect you?
- In the home, talking on a wired landline telephone is the leading cause of lightning injuries? Cordless phones are safe to use.
- You should not seek shelter in a lightning storm under a tall tree? That’s one of the most dangerous places to be.
- The Fourth of July is historically one of the most deadly times of the year for lightning in the U.S. In summer, especially on a holiday, more people are on the beach, golf course, mountains, or ball fields. Outdoor chores such as lawn mowing or house painting are at their peak.

Here are some facts about lightning:

- Lightning is a giant discharge of electricity accompanied by a brilliant flash of light and a loud crack of thunder. The spark can reach over five miles, raise the temperature of the air by as much as 50,000 degrees Fahrenheit and contain a hundred million electrical volts.
- If you can hear thunder, you can be struck by lightning — seek shelter.
- Use the 30-30 rule. When you see lightning, count the time until you hear thunder. If it’s 30 seconds or less, you are within six miles of the storm and should seek shelter immediately.
- Don’t be fooled by sunshine or blue sky! Wait at least 30 minutes after the last clap of thunder before leaving shelter.
- Swimming is particularly dangerous. Water conducts electricity and swimmers protrude from the water, offering a potential channel for electrical discharge.
- Always avoid being the highest object or taking shelter near or under the highest object, including tall trees and umbrellas. Lightning is “lazy,” and usually takes the shortest path to earth, striking the tallest object. Don’t let that be you.

BREAK - OVER

Hackers Hit American Power Grid

Symantec, the company that makes Norton Anti-Virus software, announced some very scary news about the security of the energy sector. The company said that a hacker group is targeting the worldwide energy industry, and the U.S. is a main target.

The hacker group is called Dragonfly and it's using malware to access and control computers at energy companies in the U.S. and Europe. Its two main malware tools are Backdoor.Odrea and Trojan.Karagany.

Big companies aren't the only ones at risk. Malware attacks are on the rise across the board.

Microsoft Windows computers saw an explosion in malware late last year, mostly from an application that got by most security companies.

Almost 6 out of 1,000 Windows computers were compromised up in the third quarter of 2013 - and that number jumped to 17 out of 1,000 for the last quarter. The rise was attributed mostly to a malware called "Rotbrow"

The program masquerades as a browser add-on called "Browser Protector" and is supposedly a security product. Rotbrow was found on about 59 of every 1,000 computers.

For some time, computer security companies didn't classify Rotbrow as malicious software. Rotbrow is known as a "dropper," with capabilities to download other software on a computer. It didn't initially download malware to computers it was installed on. But then Rotbrow started downloading malicious browser extensions. Microsoft noticed the change and alerted other security companies, which then began blocking it.

Karagany is capable of uploading stolen data, downloading new files, and running executable files on an infected computer. It is also capable of running additional plugins, such as tools for collecting passwords, taking screenshots, and cataloging documents on infected computers.

Right now, it seems like the group is using its access for spying purposes, but it could cause actual damage to energy supplies and delivery if it wanted to.

It is even scarier to hear that Symantec thinks the hacker group is state-sponsored because of its level of expertise. The group even seems to work between 9 a.m. and 6 p.m. in an Eastern European time zone, like it's just an everyday job.

The Dragonfly group is well resourced, with a range of malware tools at its disposal and is capable of launching attacks through a number of different vectors. Its most ambitious attack campaign saw it compromise a number of industrial control system (ICS) equipment providers, infecting their software with a remote access-type Trojan. This caused companies to install the malware when downloading software updates for computers running ICS equipment.

Dragonfly is also using other techniques to install its malware on target computers. It has tried everything from sending infected emails to company executives to corrupting websites

that people in the energy industry regularly visit.

If hackers can gain control of computers at some of the most secure companies in the world, then you know that your home or office could be vulnerable, too. You probably won't have to deal with an attack of this size, but Dragonfly is using some techniques that hackers use every day to break into personal computers and small businesses.

BREAK - OVER

Aluminum Farm

Combine amateur radio, photography, and radio controlled aircraft and you get some amazing video. This is the aluminum farm at the K3LR Multi-multi contest station.

Here are two recent short videos shot and edited by Greg, W8WWV with his new Phantom 2 quadcopter using FPV. The stability is incredible even though the wind was blowing pretty good.

https://www.youtube.com/watch?v=SA_NG-bVQuc

https://www.youtube.com/watch?v=XjgK_cAF1Y

K3LR Multi-Multi Contest Station website: [http://](http://www.k3lr.com/)

www.k3lr.com/



Marine Corps Base Camp Lejeune, N.C. Aug, 2014 - Marines with 1st Battalion, 24th Marine Regiment, move down a road while the street is covered by an M1A1 Abrams tank during an assault on a simulated enemy town during exercise Heavy Metal 14. As the assault continued, instructors and safety personnel would point out a Marine to play the role of a wounded casualty to assess the team's casualty evacuation performance.

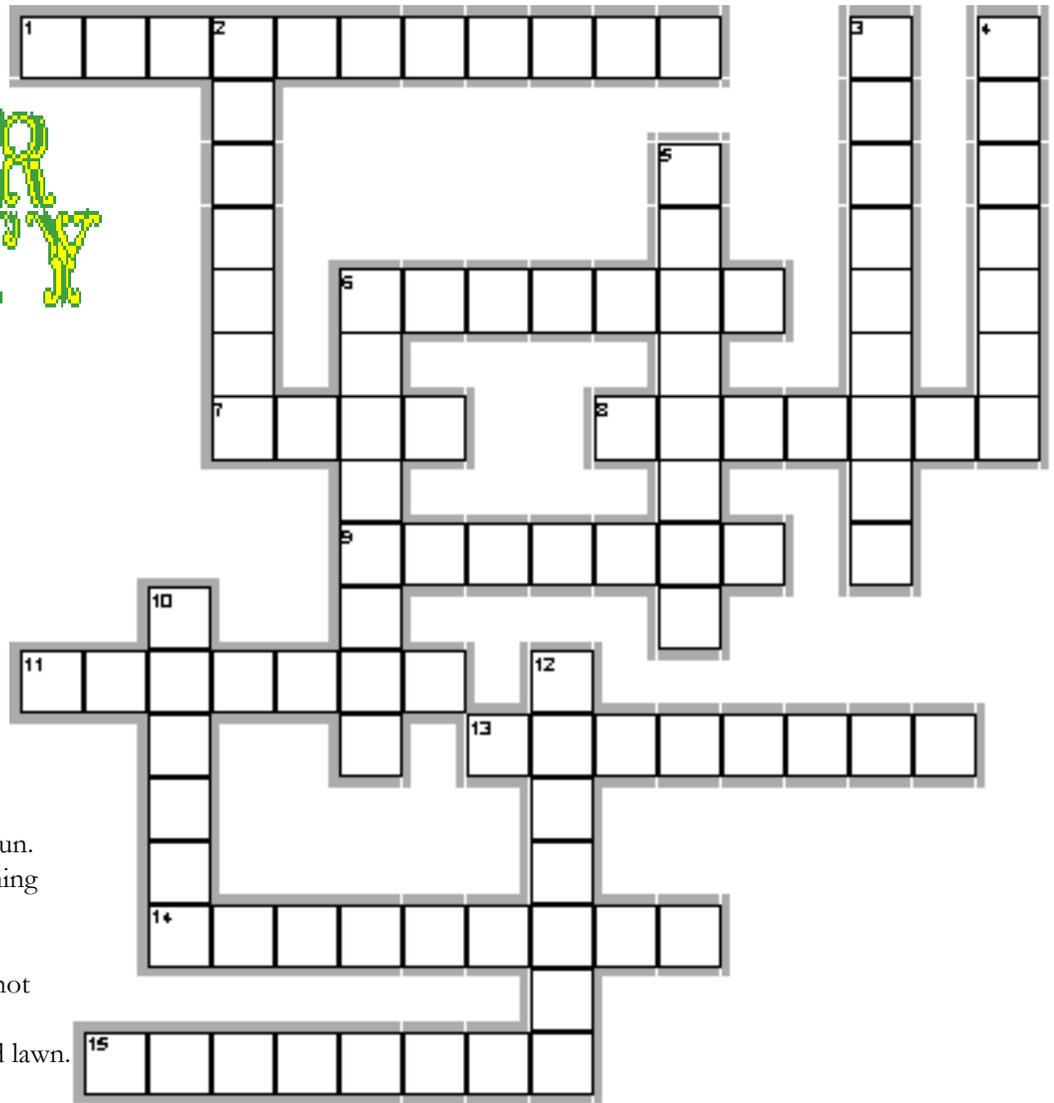
SUMMER ACTIVITY

Across

1. Promoting lush, green, growth.
6. Seeing the sites from two wheels.
7. Trying to hit the ball straight.
8. Deciphering the printed page.
9. Planing over the rippled surface.
11. Hitting the ball through the arches.
13. Played by the 'boys of summer'
14. Irritating Mother Nature to encourage growth.
15. Frolicking in one of the 10,000.

Down

2. Planned ultraviolet radiation exposure
3. Most desired after activity in the hot sun.
4. This is always good however the catching may be slow.
5. Gliding through the no-wake zone.
6. Desired by adults after activity in the hot sun
10. How to maintain that well manicured lawn.
12. A neighborhood tour, on foot.



PATRIOTIC QUOTES

July Crossword Solution

Across

2. DANIELWEBSTER—"The contest for ages has been to rescue liberty from the grasp of executive power."
7. GEORGEWASHINGTON—"Associate yourself with men of good quality if you esteem your own reputation for 'tis better to be alone than in bad company."
8. JOHNADAMS—"Fear is the foundation of most governments."
10. BENFRANKLIN—"A great empire, like a great cake, is most easily diminished at the edges."
11. ISRAELPUTNAM—"Don't fire until you see the whites of their eyes! Then fire low!"
12. SAMUELADAMS—"The public cannot be too curious concerning the characters of public men."
13. THOMASJEFFERSON—"All tyranny needs to gain a foothold is for people of good conscience to remain silent."

Down

1. PATRICKHENRY—"I know not what course others may take; but as for me, give me liberty or give me death."
3. THOMASPAINE—"Lead, follow, or get out of the way."
4. JOHNHANCOCK—"There! His Majesty can now read my name without glasses. And he can double the reward on my head!"
5. JOHNPAULJONES—"I wish to have no connection with any ship that does not sail fast; for I intend to go in harm's way."
6. NATHANHALE—"I only regret that I have but one life to lose for my country."
8. JAMESMADISON—"The truth is that all men having power ought to be mistrusted."
9. BENJAMINRUSH—"Patriotism is as much a virtue as justice, and is as necessary for the support of societies as natural affection is for the support of families."

Public Service Events



Grab that HT and have some fun!

(Editor's Note: Contact the individual listed with each event for more info or to volunteer.)

Sept 20, Saturday - Cystic Fibrosis Foundation Cycle for Life Need 6+ operators to provide communications for a 30/15 mile dual route bicycle event held in southern Scott County. Volunteers contact N0BHC@scottares.org to volunteer or for more info.

October 11th, Saturday - Belle Plaine, MN - Scenic Half Marathon - Need 20+ Operators for Half Marathon...same course as in years past. 0700 - 1100 AM. The MN-ARES Portable Repeater is planned to be used again, unless city approves us on the town water tower by then. Volunteer contact info: KC0QNA@yahoo.com or cell phone 612-578-7561.

December 6th, Saturday - Arlington-Arlidazzle Parade - Need 20+ Operators for 5K Run at 9 AM, Closing & Maintaining safety on Main street from 11 am til 7 pm & Parade at 5:30 PM. Operations will be on Green Isle UHF Repeater. Volunteer contact info: KC0QNA@yahoo.com or cell phone 612-578-7561.

BREAK - OVER

United States Citizenship!

Have you ever thought about your United States citizenship? Probably not since that Civics course a long time ago! Foreigners who want to become a United States Citizen must pass a short exam that covers some key concepts important to America. Test your knowledge on the citizenship test.

Check next month for the answer to this month's question.

What is **one** right or freedom from the First Amendment?

- A. to bear arms
- B. to vote
- C. speech
- D. trial by jury
- E. freedom of association

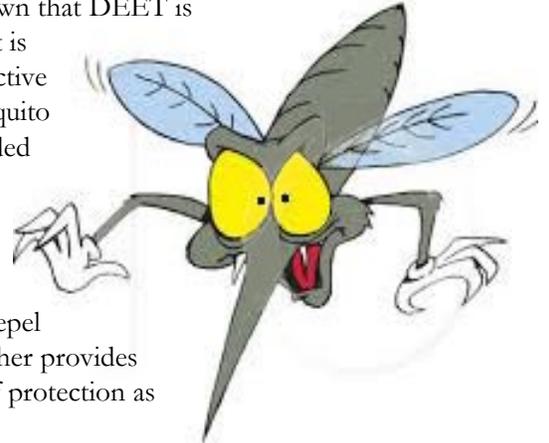
July Citizenship Exam Answer

When was the US Constitution written?

- D. 1787

Mosquito Myths

Dryer sheets make good mosquito repellents. Several other household items are also supposed to be repellents, including banana peels and Vicks VapoRub. But repeated studies have shown that DEET is the only one that is consistently effective in blocking mosquito bites over extended periods of time. While picaridin and oil of lemon eucalyptus also been shown to repel mosquitoes, neither provides the same level of protection as DEET.



Lemon Joy and Listerine will kill mosquitoes. This is an e-mail hoax debunked by Snopes.com. The idea is that leaving pools of water with lemon dish soap, or mouth-wash, around the yard will attract and kill mosquitoes. Although that is true, the mosquito would have to land and become coated in the liquid in order to die. Dish soap and mouth wash are not like insecticides in that they do not hang in the air and kill mosquitoes as they fly through.



ARES Breakfast

Saturday September 13th
7:30AM
Perkins Restaurant
Savage, MN

NECOS Schedule August 2014

The first Monday or the month the net is held on the WB0RMK repeater, Carver. You will find WB0RMK here: 147.165/765 PL 107.2

Aug 11	KB0FH Bob
Aug 18	N0BHC Bob
Aug 26	KD0UWZ Chad
Sep 1	KC0YHH Tony
Sep 8	KB0FH Bob
Sep 15	N0BHC Bob
Sep 22	KD0UWZ Chad
Sep 29	KC0YHH Tony