Hands Free Phones Required

New Minn. Bills Introduced

A bill to require motorists to use hands-free devices when talking on the phone while driving passed its first committee stop in the Minnesota Legislature on Tuesday after lawmakers heard emotional testimony from several people who lost loved ones in crashes caused by drivers who were distracted by cellphones.

The legislation currently does not include land mobile and Amateur radio communications. Amateurs must remain alert and follow this legislation because the conditions may take a strange turn at any moment. It would be a good idea to contact your legislators and let them know your opposition to trying to outlaw mobile Amateur radio operation.

A bipartisan group of lawmakers, business groups, the Minnesota State Patrol and families who had family members killed by distracted drivers said the legislation will save lives. Distracted drivers in Minnesota killed 59 people and injured 223 in 2017, they said."It seems to be to be comparable to what drunk driving was in the 20th century,"

Drivers would face a $50 fine – the same penalty that texting while driving currently carries – unless they're using voice-activated calling or one-touch features on their cell phones. Legislators expected to pass a version of the bill without raising the penalties, then have what's likely to be a tougher debate over what the penalties should be.

The Department of Public Safety says at least 27 of the state's approximately 380 traffic deaths last year were related to distractions of all kinds. Experts testified that cellphone use is the fastest-growing distraction, causing a rising number of deaths and injuries.

Minnesota would join 16 other states and the District of Columbia to require hands-free cell phone use in cars. Illinois is the only Midwestern state that currently outlaws handheld phones for drivers.

HELP NEEDED

Volunteers are needed for Net Control Station for the Monday evening Scott ARES Net. A sudden medical issue has forced the usual NECOS off the air for a while.

Serving as NECOS provides valuable experience in emergency communications. You never know when you might be expected to assume the NECOS role in an emergency. Gaining NECOS experience in a non-emergency setting is a real confidence builder.

The 7PM net meets the first Monday of the month on the Carver Repeater (147.165) while the remaining nets meet on 146.535s.

The Net is a directed net that runs under emergency operating procedures. There are detailed scripts for the NECOS on the Scott ARES website. To assume NECOS control or have your questions answered, just email Bob at N0BHC@ScottARES.org. Jump in and gain some fun experience.

ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)
Breakfast Saturday, February 9th
Digital Monday, February 11th

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

December YOTA Month Activity

YOTA Records More Than 80,000 Contacts

More than 80,000 contacts went into logs at YOTA suffix stations and others participating in December Youngsters on the Air (https://www.ham-yota.com/) Month, with most operations in International Amateur Radio Union Region 1. The final tally included 46,989 on SSB, another 28,064 on CW, some 3,814 on FT8, and the rest on various other modes.

"This year, as many as 44 participating stations made 82,938 QSOs in December, proving once again that neither the weather nor the holidays can keep a radio amateur away from the station," Gergana Ruseva, LZ1ZYL, said in the 2018 YOTA Month report.

Ruseva said YOTA was happy to bring young radio amateurs together by hosting this event, which "inspires them to be more active on the bands and shows them there are many people listening on the other side."

The most active station during YOTA Month 2018 was II5YOTA in Italy, which logged 8,387 contacts. The preferred bands turned out to be 40 and 20 meters, with more than 30,000 contacts logged from YOTA Month participants on each band. Complete statistics are on the YOTA website <https://events.ham-yota.com/stats>.

Hands-free *- cont'd from page 1*

Paul Aasen, president of the Minnesota Safety Council, said truckers are already restricted to hands-free devices under federal law. Most of the 16 other states have seen large reductions in fatalities, he testified, averaging 16 percent.

BREAK - OVER

Scott County ARES Contacts

Emergency Coordinator
Bob Reid N0BHC
13600 Princeton Circle
Savage, MN 55378
952-894-5178
N0BHC@arrl.net

Asst Emergency Coordinator
Chad Palm KD0UWZ
Chaska, MN
KD0UWZ at scottares.org

Test Your NIMS Knowledge

This month we begin our review of ICS-700, An Introduction to National Incident Management System. This corse is designed to enable personnel to operate efficiently during an incident or event within the Incident Command System (ICS). ICS-700 provides an overview of the NIMS structure.

Check your recall of the course material with this question.

1. ICS encourages jurisdictions to use common terminology. Common terminology:

A. Is unique terminology that responders use when managing incidents.

B. Encourages the use of radio codes to communicate efficiently at incident site.

C. Applies exclusively to the naming of facilities used by the Command Staff.

D. Uses plain English to allow personnel from different agencies to work together.

Check next month's ARES Communicator for the solution

December NIMS Knowledge Solution

1. Interoperability:
b. Is the ability of emergency management/response personnel to interact and work well together.

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.

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/ and www.scottares.org/NBEMS.htm

Here are the most recent releases as of Jan 23,2019.

Software	Version
Fldigi	4.0.18
Flwrap	1.3.4
Flmsg	4.0.7
Flamp	2.2.03

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.

Excessive Antenna Fees

Fees Violated Reasonable Accommodation

Long-pending Amateur Radio antenna litigation that ARRL helped to fund has finally borne fruit. The Supreme Court of the State of New York, Appellate Division: Second Judicial Department has ruled in the case of Myles Landstein, N2EHG, that the Town of LaGrange, New York, not only overstepped its state-granted authority by assessing excessive fees, but violated the limited federal preemption PRB-1 < www.arrl.org/prb-1 > in the process. PRB-1 requires municipalities and states to "reasonably" accommodate Amateur Radio antennas and to apply the "minimum practicable regulation" in handling Amateur Radio antenna applications. The ruling is slated to be published as a case decision. Landstein, who lives in the Bronx, had wanted to erect a 70-foot antenna support structure for a multioperator station in the Hamlet of Lagrangeville; the Town of LaGrange has a 35-foot height limit.

"This case, which goes back to 2013, was about applying PRB-1 to a situation in which a municipality attempted to thwart the installation and maintenance of ham radio antennas by imposing excessive permit application costs on the ham applicant," said communications attorney Chris Imlay, W3KD, who is familiar with the case. Imlay said the FCC has refused to clarify the cost-prohibition issue as it relates to PRB-1's "minimum practicable regulation" and reasonable accommodation provisions of PRB-1.

"The Town incurred more than $17,000 in legal consulting fees in connection with [Landstein's] applications, and informed the petitioner that he was required to reimburse the Town for these fees before any determination would be made with respect to the applications," the court decision recounted. "The Town subsequently, as 'an accommodation to the petitioner,' reduced the amount...to...$5,874, but also required the petitioner to maintain a minimum advance continuing escrow balance of at least $1,000 to cover the Town's future consulting costs..."

"We hold that, because the Town did not limit the consulting fees charged to the petitioner to those necessary to the decision-making function of the town's Planning Board and Zoning Board of Appeals, the town exceeded its state-granted authority by requiring payment of the consulting fees and, moreover, violated a rule promulgated by the [FCC]," the court concluded.

Given the significant delay, Imlay said both he and Landstein had lost hope that the case would ever be resolved in Landstein's favor — and in the favor of radio amateurs in New York, generally — much less be a case that would "create favorable precedent for Amateur Radio."

"ARRL originally was drawn to this case, because New York is the only state that, due to a very old case decision, has held that Amateur Radio antennas are not necessarily a 'normal accessory use' to residential real property," Imlay explained. "Because the issue in the case dealt with both that issue and the issue of cost prohibitions in the permitting process relative to the cost of the antenna installation, we decided to fund the case." Landstein lost at trial, and an appeal was filed in about 2015, for which ARRL provided memoranda of law about the cost-prohibition issue. "The antenna at issue and the support structure was to cost no more than $1,000," Imlay said.

The court concluded that the town "may not use its land-use regulatory authority to construct 'hoop after hoop' for the petitioner to jump through in order to erect his radio antenna tower [and] cannot impose unreasonable expenses so as to create an insurmountable financial barrier to the pursuit of the project. In this context, not only must the consultant fees be reasonable..., but the underlying services must be necessarily related to those municipal regulatory functions which are not preempted by federal law."

BREAK - OVER

YOTA *- cont'd from page 2*

YOTA Month station OL18YOTA was operated during December from several places within the Czech Republic. [Photo courtesy of YOTA]

YOTA also has announced that the YOTA Youth Sked will start up again in 2019. The on-the-air event will take place every fourth Thursday from 1900 to 2200 UTC, with a different group of youngsters acting as net control. The YOTA Youth Sked will convene on or about 7.175 MHz, shifting later to 3.675 MHz.

BREAK - OVER

The Spy Within?

Supermicro Says No Malicious Chips

Supermicro has faced allegations for months that some server motherboards it sold contained malicious chips that opened a backdoor into the data centers of major technology companies, including Apple and Amazon. On Tuesday, the company said that it had found no evidence its hardware had been compromised. It hired an independent firm to determine whether the claims were accurate.

The company came under scrutiny < www.electronicdesign.com/embedded-revolution/your-motherboard-hacked   > earlier this year after a Bloomberg report claimed that some Supermicro motherboards were carrying covert implants inserted in factories operated by the company's Chinese contractors. Supermicro said that the firm it hired had audited a representative sample of its motherboards, including its more recently manufactured products, and found no evidence of malicious chips.

The company was unable to find any evidence supporting the Bloomberg report. The implants, according to Bloomberg, were camouflaged as tiny passive components and were added to the boards during manufacturing. The report said that the malicious chip was designed to give Chinese intelligence agents a secret door into the networks of almost 30 American companies, including government contractors.

Charles Liang, Supermicro's founder and chief executive officer, said Tuesday: "no government agency has ever informed us that it has found malicious hardware on our products; no customer has ever informed us that it found malicious hardware on our products; and we have never seen any evidence of malicious hardware." He added: "Today's announcement should lay to rest the unwarranted accusations."

TheSilicon Valley company said that it had safeguards in place to protect Supermicro motherboards from tampering. The company said that its employees are required to be in the factories where the boards are assembled. There, they oversee electrical, functional and other automated inspections. Supermicro tests every layer of every board during assembly, the company said in its letter to customers.

Supermicro said that every motherboard is tested against its design. That allows the company to detect components that have been misplaced or are not supposed to be there. The company said that it rejects any motherboard that does not match its design. To guard against tampering, no single employee, team or contractor has unrestricted access to any complete board design, according to Liang.

The company released a short video <ftpw.supermicro.com.tw/en/news/CEO-3rdPartySecurity-Update/?tab=video> in which it called the alleged infiltration of its motherboards at assembly "impossible." Apple and Amazon

WordPress Botnet!

Every day, the world is under constant threat of cyberattacks. Data breaches, spam emails, identity theft - there are probably millions of attacks going off at any given minute.

Obviously, some are worse than others. Certain attacks can be devastating, depending on the hackers' endgame. With enough digital firepower, hackers could take down power grids, water utilities, communication networks and more in multiple cities around the world. Now, a major botnet has been found that could be building an army of computers to do just that.

What are these hackers up to? Security researchers at Defiant recently discovered a botnet that contains at least 20,000 websites that use WordPress for publishing. And the impacted sites are being used to infect other WordPress sites and make them part of the botnet. (*A botnet is a group of gadgets that hackers have taken over without the owner's knowledge. The hackers seize control of unwitting gadgets with a virus or malware and then use the network of infected computers to perform large-scale hacks or scams.*)

The hackers are using four command-and-control servers and more than 14,000 proxy servers that are located in, get this,

have both vigorously denied any knowledge of malicious chips, hardware manipulations or other vulnerabilities purposely planted in any of their servers. The denials came after Bloomberg reported that both companies had turned up the chips in their data centers.

BREAK - OVER

First Thursday Net

Metro District Hospital Net

The Metro District ARES Hospiital net is held on the first Thursday of each month. The purpose of the net is to provide an opportunity to exercise Dual-band xcvrs installed at hospitals and clinics in the metro area. The net is open to all amateur radio ops and provides the opportunity to participate in a directed net and practice directed net procedures.

Everyone is welcome!

- First Thursday of each month
- 12:30PM (lunch time)
- 146.700 - (PL118.8)

Surf's Up!

Surfing the web for interesting topics related to radio, building, computing, and anything else interesting along the way

A Hams Notebook

http://ham-radio.com/k6sti/
Check out one Ham's collection of solutions to a varied list of problems that interest radio aficionados. Check out the coil calculator and play with the inputs to observe the effect.

LED Current Control

https://www.eleccircuit.com/how-to-use-led-with-3v-battery/
This post goes through the Ohms Law basics of determining the value of series resisters.

LibrePCB

https://librepcb.org/
LibrePCB is an Open Source printed circuit board design software project, providing schematic capture, board layout, and component library functionality. The just-released version 0.1.0 runs on Unix/Linux, Mac OS X, and Microsoft Windows. This version can "download and create libraries, draw schematics, route multilayer PCBs and export Gerber files" but lacks support for "DRC, BOM export or buses." The authors invite people to try it with their projects; they are promising that improved future versions of the package will be compatible with designs created with today's software.

BREAK - OVER

Wordpress Botnet *- cont'd from page 4*

Russia. They are doing this to hide their identity while carrying out brute-force attacks on unsuspecting websites.

The question is, what are these hackers up to? It appears, at the moment, they are just building a botnet army.
They could be waiting until they've compromised enough websites to carry out a major cyberattack on a country's infrastructure.

The impact of an all-out infrastructure cyberattack can be absolutely crippling to a target state. The consequences of a complete infrastructure shutdown can be utterly devastating. If terrorist hacking groups attack and manage to get operational access to critical civilian infrastructures like our electrical power grid, water utilities, the internet and communication networks, it could take weeks before these services can be restored.

Almost 3 years ago, Russia dropped a cyber-bomb on Ukraine, hacking energy companies and wiping out power to hundreds of thousands. Government security agents say that was just the beginning. A test of sorts for possibly a much bigger plan.

BREAK - OVER

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.

Strap on your thinking cap and see what you can recall. Here is this month's sample:

1. Which of the following describes the construction of a MOSFET?
   A. The gate is formed by a back-biased junction
   B. The gate is separated from the channel with a thin insulating layer
   C. The source is separated from the drain by a thin insulating layer
   D. The source is formed by depositing metal on silicon

2. Which element of a triode vacuum tube is used to regulate the flow of electrons between cathode and plate?
   A. Control grid
   B. Heater
   C. Screen Grid
   D. Trigger electrode

3. What is meant by the term MMIC?
   A. Multi Megabyte Integrated Circuit
   B. Monolithic Microwave Integrated Circuit
   C. Military-specification Manufactured Integrated Circuit
   D. Mode Modulated Integrated Circuit

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

Groundhog Day February 2, 2019

Can I go back to sleep?

I'm a Groundhog, not a Weatherman!

December General Pool Answers

1. What is the approximate junction threshold voltage of a conventional silicon diode?
C. 0.7 volts

2. Why must the cases of some large power transistors be insulated from ground?
D. To avoid shorting the collector or drain voltage to ground

3. Which of the following is an advantage of CMOS integrated circuits compared to TTL integrated circuits?
A. Low power consumption

BREAK - OVER

Amateur Radio License Exam

Want to become a ham? Want to upgrade your license? You can find information and resources to success in ham radio at this page: http://www.scottares.org/License_Info.htm
If you want to ask questions or find a local Elmer (Mentor) just drop an email to: newhaminfo@scottares.org

The hams in Scott ARES gather for breakfast the first Saturday of the month at the Perkins Restaurant in Savage. Bring you ham radio questions and talk to local amateur radio operators.

Now that you have done the work to study for your upgrade, here is where to find a convenient exam session near you. There is a VE exam search engine at: http://www.arrl.org/exam_sessions/search

Walk-ins allowed at most sessions however it is always best to check the details at the specific session you are planning to attend. Below is a list of scheduled sessions close to Scott County. Good Luck!

January 28, 2019 Monday 6:00 PM
Sponsor: SMARTS
Dale A. Blomgren (952) 402-2155
Email: kdzerob@aol.com
Location: Carver County Library
7711 Kerber Blvd
Chanhassen MN 55317
Walk-ins allowed, Pre-reg requested

February 2, 2019 Saturday 10:00 AM
St Paul Radio Club
Leon H. Dill (651) 688-9964
Email: w0coe@arrl.net
Location: Ramsey Co Library Maplewood
3025 Southlawn Dr
Saint Paul MN 55109-1577
Walk-ins allowed, Pre-reg requested

February 13, 2019 Wednesday 7:00 PM
Sponsor: VARC
James C. Rice (612) 384-7709
Email: jrice@danpatch.org
Location: Perkins Restaurant & Bakery
17387 Kenyon Avenue
Lakeville MN 55044-4459
Walk-ins allowed, Pre-reg requested

February 23, 2019 Saturday 8:45 AM
Sponsor: Bloomington Off/Emergency Mgmt
Daniel J. Royer (952) 888-9756
Email: dandroyer@gmail.com
Location: City Hall-Police Department
1800 W Old Shakopee Rd
Bloomington MN 55431

March 02, 2019 Saturday 10:00 AM
St Paul Radio Club
Leon H. Dill (651) 688-9964
Email: w0coe@arrl.net
Location: Ramsey Co Library Maplewood
3025 Southlawn Dr
Saint Paul MN 55109-1577
Walk-ins allowed, Pre-reg requested

BREAK - OVER

Monday Evening 7PM

The Scott ARES net meets every Monday evening at 7:00 PM either on 146.535 simplex or on the first Monday of the month the WB0RMK repeater 147.165 (PL 107.2).

The net is in a directed net format and provides the opportunity to practice working in an emergency net style.

There is help available in setting up and using NBEMS digital messaging software and generally a weekly digital message for practice.

Everyone is welcome to check in and contribute two cents worth!

ARES   Breakfast
Saturday
February 9th 2019
7:30AM
Hy-Vee Market Grille,
6150 Egan Dr, Savage, MN

NECOS Schedule January 2019

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

Date   NECOS_____
January 2019
Jan 28th - WA0DGW John
February 2019
Feb 4th - KD0UWZ Chad First Mon. Net
Feb 11th - N0BHC Bob
Feb 18th - WA0DGW John
Feb 25th - KD0UWZ Chad