



ARES COMMUNICATOR

Information for Scott County Amateurs



April, 2016

Accurate, Reliable Emergency Communications for our Community

Volume 16, Number 4

Ecuador Quake

Press Release -18April2016,:Rick, NE8Z / HC1MD

“Most of the damage from the earthquake yesterday affected the Guayaquil-HC2 and HC4-Portoviejo/Manta areas of Ecuador. Well known DXer HC4L-Lilian de Ayala from Portoviejo is safe. Some structures in the town of Portoviejo and Manta suffered severe damage. Many people are still buried in the rubble of collapsed buildings and homes. Electrical power and commercial communications systems have been either destroyed or shut off in the HC4 area. The HC4 hams are operating with mobile stations or with 12vdc batteries from their home stations.

“The “Cadena HC” emergency frequency is now activated and is running 24 hours per day on 7.060 LSB. The HC hams have been very busy coordinating search and rescue activities on that frequency.

“The Ecuadorean Amateur Radio operators request that Ham Radio community please keep 7.060kHz clear. Please ask DX-peditions transmitting on 40m RTTY not to spread their pileups up as high as 7.060kHz.

A magnitude-7.8 quake struck off Ecuador’s central coast on Saturday, April 16. The death toll from Ecuador’s magnitude-7.8 quake has more than tripled to 233, with hundreds more injured in the worst quake to strike the country in 40 years.

The epicentre of the quake was along the Pacific coast in a sparsely populated region, with Ecuador’s president Rafael Correa naming the towns of Manta and Pedernales.

Another earthquake with magnitude 5.1 occurred near Portoviejo, Ecuador at 13:25:45.10 UTC on Apr 18, 2016.

BREAK - OVER

The ARES COMMUNICATOR is published for the benefit of Amateur Radio Operators in Scott County and other interested individuals.
EDITOR: Bob Reid, Scott County Emergency Coordinator
Snail Mail: 13600 Princeton Circle
Savage, MN. 55378
E-Mail: NOBHC@aol.com
Phone: Home 952-894-5178 Portable 612-280-9328
Reader submissions encouraged!

Waconia 10K Event

Saturday, April 23, 2016

The Walk On Waconia 10-K Walk/Run & 10-Mile Walk/Run is ready for radio communicators to line up and take their marks!

Volunteers with handhelds and maybe one or two bicycle mobile operators are welcome to volunteer their skills and equipment for the City of Waconia event.

Volunteers will assemble for a pre-event briefing at the communications trailer located at the Bayview Elementary school at 6 AM. The 10 mile run will have an 8 AM start at St. Joe’s Church. The 10K run will have an 8:30 AM start on the North side of Lake Waconia. Both events will wind up around noon.

Communications will take place on 446.000 (s) tone 136.5, 147.165(+) (back-up) and Talk-in, and 442.825+ DCS 271.

If you have questions or want to volunteer, contact Don Burgess, KC0QNA, by email at kc0qna@yahoo.com or by phone at 612-578-7561.

Join the fun and get Radio-active!

BREAK - OVER

ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)

Breakfast Saturday, May 14th

Digital Monday, May 16th

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

AFD Crossband Contacts

This year's Armed Forces Day Crossband Communication Test on Saturday, May 14, will include a significant new wrinkle: Select military stations will be using 60 meter interoperability channels to communicate *directly* with Amateur Radio stations on the band. Back this year, select military stations will use crossband Automatic Link Establishment (2G ALE) communication as well as MIL-STD Serial PSK to send the Secretary of Defense Armed Forces Day message. Armed Forces Day 2016 is Saturday, May 21, but the radio event is held earlier to avoid conflicting with Dayton Hamvention, May 20-22.

The annual Armed Forces Day Communication Test is an opportunity to exercise two-way communication capability between Amateur Radio and military stations using a variety of modes, including SSB and CW as well as digital modes. The annual event gives participants — including shortwave listeners (SWLs) — an opportunity to demonstrate their technical skills, and to receive recognition from the appropriate military radio station.

The Army, Air Force, and Coast Guard cosponsor the joint military/Amateur Radio, with military stations transmitting on military frequencies and listening on Amateur Radio bands.

Amateur Radio stations and shortwave listeners interested in trying the MIL-STD Serial PSK mode can download the software program, *MS-DMT*.

Full details about this year's Armed Forces Day radio will be posted by April 12 and will also appear on the US Army MARS Facebook page.

BREAK - OVER

Thank You Tony!

KC0YHH changing QTH

Tony and his XYL are moving to another home in Minnetonka very soon. He has announced he is giving up his Assistant Emergency Coordinator position due to he move.

We all wish Tony nothing but success in his new surroundings. He reports at this time he has dismantled the shack and does not know when he will get settled and back on he air.

Tony did an excellent job supporting Scott County ARES as AEC. The AEC positions contribute to our organization with huge effort behind the scenes to contribute to smooth efficient operations. His relocation will leave a large role to be filled.

Tony promised to crash the net every once in a while so keep your squelch open for signals from the northwest!

BREAK - OVER

MRC Spring Meeting

The Spring Minnesota Repeater Council Meeting will be held on Saturday April 23 at the St Cloud Regional Library.

Registration will start at noon with a call to order at 1:00 PM.

The MRC list of repeaters has been updated with a current repeater list showing repeaters that are on the air available at: <http://mnrepeaters.org>.

Repeater updates need to be submitted with plenty of lead time to make inclusion inn the ARRL directory. Please bear in mind that submissions to the ARRL is currently a best effort project as data exports between the MRC and ARRL are incompatible. We have spent a great deal of time manually processing and reviewing data!

Repeater enthusiasts are welcome at the meeting.

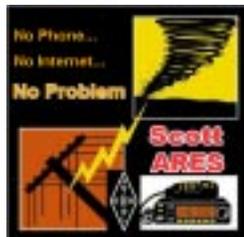
BREAK - OVER

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



Deletion of Kingman Reef

The ARRL Awards Committee has voted to delete Kingman Reef (KH5K) from the DXCC List, effective 29 March, 2016. Kingman Reef will be added to the Deleted Entities List on 29 March, 2016. The total number of entities on the List will drop from 340 to 339.

Kingman Reef's original addition by virtue of separate administration has changed (separate administration by the U.S. Navy has been removed), and the reef does not meet any current criteria to remain on the list. The U.S. Fish and Wildlife Service administers Kingman Reef and Palmyra Island. The reef is too close to Palmyra Island to count as a separate entity. The reef is now considered part of the Palmyra/Jarvis DXCC entity.

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.arrrl.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!

April 25, 2016 Monday 6:00 PM

SMARTS

Dale A. Blomgren (952) 402-2155

Email: kd0b@arrrl.net

Location: Carver County Library

7711 Kerber Blvd

Chanhassen MN 55317

Walk-ins allowed, Pre-reg requested

May 7, 2016 Saturday 10:00 AM

Sponsor: St Paul Radio Club

Leon H. Dill (651) 688-9964

Email: w0coe@arrrl.net

Location: Ramsey Co Library Maplewood

3025 Southlawn Dr

Saint Paul MN 55109-157

Walk-ins allowed, Pre-reg requested

May 11, 2016 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

May 21, 2016 Saturday 9:00AM

Sponsor: SEMARC

Daniel M. Franz (651) 769-0358

Email: wd0gup@hotmail.com

Location: Zion Lutheran church

8500 Hillside Trl S

Cottage Grove MN 55016-3273

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. What signal source is connected to the vertical input of an oscilloscope when checking the RF envelope pattern of a transmitted signal?
 - A. The local oscillator of the transmitter
 - B. An external RF oscillator
 - C. The transmitter balanced mixer output
 - D. The attenuated RF output of the transmitter
2. What sound is heard from an audio device or telephone if there is interference from a nearby single-sideband phone transmitter?
 - A. A steady hum whenever the transmitter is on the air
 - B. On-and-off humming or clicking
 - C. Distorted speech
 - D. Clearly audible speech
3. What effect can be caused by a resonant ground connection?
 - A. Overheating of ground straps
 - B. Corrosion of the ground rod
 - C. High RF voltages on the enclosures of station equipment
 - D. A ground loop

BREAK - OVER

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

"Though no one can go back and make a brand new start, anyone can start from now and make a brand new ending."

Carl Bard

March General Pool Answers

1. Which of the following is the best instrument to use when checking the keying waveform of a CW transmitter?
 - A. An oscilloscope
2. Which of the following might be a use for a field strength meter?
 - A. Close-in radio direction-finding
3. Which of the following could be a cause of interference covering a wide range of frequencies?
 - C. Arcing at a poor electrical connection

BREAK - OVER

BREAK - OVER

DARPA Bandpacking!

DARPA's latest grand challenge takes on the radio spectrum

One of the most hotly contested bits of real estate today is one you can't see. As we move into an increasingly wireless-connected world, staking out a piece of the crowded electromagnetic spectrum becomes more

important. DARPA is hoping to help solve this issue with its latest Grand Challenge, which calls for the use of machine-learning technologies to enable devices to share bandwidth.

The Spectrum Collaboration Challenge (SC2) is aimed at alleviating an ongoing technological headache. Ever since the invention of radio, it's been recognized that there is only so

much of the electromagnetic spectrum to go around, so government regulations were imposed to allocate bandwidth.

Early broadcast technology was fairly crude and radio and television services, for example, were given whole regions of the spectrum that today seem like allocating the entire Missouri river basin to run a toothpick factory. In recent decades, the rise of digital technology has pushed a reshuffle of these allocations that has also sparked a lot of bickering in military and civilian circles over who gets what and how much.

The SC2 is based on the idea that wireless devices would work better if they cooperated with one another rather than fought for bandwidth. Since not all devices are active at all times, the agency says, it should be possible through the use of artificial intelligence machine-learning algorithms to allow them to figure out how to share the spectrum with a minimum of conflict.

DARPA announced the competition in front of 8000 engineers on Wednesday at the International Wireless Communications Expo (IWCE) in Las Vegas. SC2 will run from 2017 through 2020 with teams competing to create radios that can collaborate most effectively with other radios. The competition will end with a live event and the prize is US\$2 million.

To host the event and act as a venue for further research, DARPA is building the largest-of-its-kind wireless testbed called the "Colosseum" after the famous arena in Rome. This will

UNITED STATES FREQUENCY ALLOCATIONS

THE RADIO SPECTRUM



Test Your NIMS Knowledge

This month we continue our review of ICS-800: National Response Framework. The purpose of the National Response Framework is to ensure that all response partners across the Nation understand domestic incident response roles, responsibilities, and relationships in order to respond more effectively to any type of incident. The Framework focuses on response and short-term recovery instead of all of the phases of incident management.

Check your recall of the course material with this question.

1. Operating under the direction of the FEMA Regional Administrator, Regional Response Coordination Centers (R RCCs) coordinate Federal regional response until:
 - A. The Principal Federal Official (PFO) is designated.
 - B. The National Operations Center (NOC) assumes coordination.
 - C. Incident response and demobilization are completed.
 - D. The Joint Field Office (JFO) is established.

Check next month's ARES Communicator for the solution

March NIMS Knowledge Solution

Which organization serves as FEMA's primary operations management center, as well as the focal point for national resource coordination?

- B. National Response Coordination Center

BREAK - OVER

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/download.html and <http://www.scottares.org/NBEMS.htm>

Here are the most recent releases as of March 15, 2016.

Software	Version
Fldigi	3.23.08
Flwrap	1.3.4
Flmsg	2.0.15
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.



Drones

A drone-mounted chainsaw, what could possibly go wrong?

Because these whirring flying machines are apparently not threatening enough on their own, some enterprising Finnish folk have loaded one up with a chainsaw and unleashed it on nearby trees, icicles and poor unsuspecting snowmen.



The chainsaw wielding Killer Drone could be seen as an upstaging of last year's home-made handgun drone, depending on your weapon of choice. What is said to be a remote-controlled chainsaw is mounted onto a multicopter and then set in flight.

With the operators standing way, way too close to their homemade launchpad, the Killer Drone harmlessly roams the snowy woodlands before kicking into action and wreaking havoc on the snow landscape, to ultimately be brought undone by a friendly pink balloon.

Just when you thought drones couldn't create any more of a buzz. Check out the video here: www.gizmag.com/killerdrone-chainsaw/42605

BREAK - OVER

Deep Thoughts

IF PEOPLE COULD
READ MY MIND...
I'D GET PUNCHED
IN THE FACE A LOT.

White House Tower Falls

Lighting Debris in Oval Office

by Wireless Estimator April 1, 2016

Washington's federal buildings are still on lock down after a communications tower collapsed on the south lawn of the White House at about 8:12 a.m., according to Reuters White House correspondent Jeff Mason who witnessed the guyed tower "teeter for about a minute, buckle and then twist like a drunken dreidel before it smashed to the ground."

Capitol Police and Secret Service agents immediately surrounded the White House, their greatest concentration outside of President Obama's office which had its window shattered by flying debris.

Associated Press has reported that the FCC's Office of Engineering and Technology has personnel at the site to investigate whether the tower's failure was sabotage, if it was due to a structural failure or if it collapsed in its own pool of



embarrassment because it had no tenants.

When Scott Bartlett of AnchorGuard appeared on CNBC this morning and said that the White House's catholic protection concern for its anchors wasn't enough, he was immediately castigated by host Rachel Maddow who said that

cont'd col. 2

he had no anchor knowledge and if he did, "Why aren't you a top rated TV personality program anchor like I am?"

An industry email news bulletin quickly questioned this morning whether American Tower CEO James Taiclet would be investigated since, "After all, the tower's lighting beacon that went through Obama's office window appeared to be manufactured by Honeywell, and wasn't Mr. Taiclet previously an executive of Honeywell? Do we need to say any more?"

In a briefing this morning, White House Press Secretary Josh Earnest said that although the President was shaken when he thought about what damage it could have done to the Easter egg hunt if it happened last week, "scaloping all of the good hiding places," he felt a lot safer with thousands of pounds of steel falling in his backyard than his former Chicago constituents do "who must dodge and rake tons of spent lead daily."

"The President said this morning that he believes the collapse of the tower wasn't caused by Islamic terrorists, faulty engineering, low bidders on the initial installation or post-erectile dysfunction," Earnest said.



BREAK - OVER

Funcube and Fox Sats Collide

AO-73 and AO-85 Mix it Up!

by Anthony K3NG 1 April 2016
www.AmateurRadio.com

In a shocking turn of events in the amateur satellite community, AMSAT-NA is claiming AMSAT-UK steered their AO-73 Funcube satellite into the AMSAT-NA AO-85 Fox 1 bird. NORAD satellite tracking confirmed at 0200Z a combined debris path consistent with the orbits of both satellites. Both satellites are silent and assumed totally destroyed. AMSAT-NA officials in a press conference called the move by AMSAT-UK an "act of war" and promised swift retaliation but wouldn't give details on the next move. AMSAT-UK officials taunted AMSAT-NA with several incendiary tweets.

In other satellite news, North Korea announced their plans to launch the first of many amateur radio satellites. The satellites were described as being "worthy of Supreme Leader" and will feature outrageously over-modulated audio similar to North Korean state run television so that North Koreans can properly understand each other when communicating through the satellites.

BREAK - OVER

Restore Modes on 80M 75M

ARRL Bulletin 13 ARLB013

In comments filed in late March on its Petition for Rule Making (RM 11759) seeking changes to 80 and 75 meters, the ARRL has told the FCC that its primary objective is to “rebalance” the bands by correcting a 10-year old FCC error.

“ARRL’s proposal is not fairly viewed as a proposal to take anything away from anyone,” the League’s comments assured. “It is more properly viewed as the effectuation of a fair, equitable, and efficient ‘band plan’ looking forward for the foreseeable future that balances everyone’s needs, and which remedies a plainly unfair plan, imprudently created in the 2006 Report and Order in WT Docket 04-140.

Prompting the League’s assurances were comments filed on the ARRL’s Petition by a number of Amateur Extra class licensees, who felt that refarming 3600 to 3650 kHz for data modes could prove to be a disincentive to General licensees to upgrade. Others commenters saw it as an unfair spectrum grab. The ARRL noted that prior to 2006, the band was evenly divided between RTTY/data and phone/image subbands, with the RTTY/data subband extending from 3500 to 3750 kHz, and the phone/image subband extending from 3750 to 4000 kHz.

The 2006 FCC Report and Order “substantially altered” what the League called “this even division of emission types.” In outlining the history of the proceeding, the ARRL pointed out that the FCC’s Notice of Proposed Rulemaking in Docket 01-140 would have shifted the line between the 80 meter RTTY/data subband and the 75 meter phone/image subband from 3750 kHz to 3725 kHz, pursuant to a 2002 ARRL Petition for Rule Making, RM-10413. This would change the ratio of spectrum between phone/image and RTTY/data segments on 75/80 meters from 50/50 to 55/45, and it is what the FCC proposed in its NPRM.

In its Report and Order in Docket 04-140, however, the FCC made “a very substantial and unjustifiable departure” from what it had proposed in its NPRM, the ARRL recounted. The Commission expanded the phone/image subband at 75 meters to 3600-4000 kHz, and it reduced the 80 meter RTTY/data subband to 3500-3600 kHz, eliminating RTTY operation above 3600 kHz and changing “the entire dynamic of this band,” the League said.

The FCC had said in its proposal that no licensees would lose operating privileges. Nonetheless, the FCC’s phone band expansion reduced by 100 kHz the spectrum between 3500 and 4000 kHz that was previously available to General class

licensees, while Advanced licensees lost 75 kHz. In an apparent FCC oversight, the Report and Order completely eliminated access by automatically controlled digital stations (ACDS) to 3620 to 3635 kHz. A subsequent FCC Report and order and Order on Reconsideration only made the situation worse by replacing the deleted ACDS segment with 3585-3600 kHz.

“It resulted in a sudden and severe dislocation of traffic-handling nets using telegraphy, without advance planning or notice,” the ARRL said. “It disaccommodated net participants with General and Advanced class licenses; and it worsened the effect of the overexpansion of the 75 meter phone/image subband.”

The result, the ARRL noted, has been “a shortfall in available RTTY/data spectrum on 80 meters” that has created a significant obstacle to narrowband digital data communications and experimentation. The League said its current Petition “simply restores that which was disrupted in 2006 in error.”

In its comments, the League conceded that compromises are inevitable in managing a heavily used band like 75/80 meters, no matter the band planning approach. “Looking forward, it is necessary, in order to encourage experimentation with and expand the use of digital communication techniques, to rebalance the 75 and 80 meter subbands,” the ARRL concluded.

BREAK - OVER



ARES Breakfast

Saturday May 14th

7:30AM

Perkins Restaurant

Savage, MN

NECOS Schedule April 2016

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](https://www.arrl.org/emergency-preparedness)

April 2016

Apr 4 KD0UWZ Chad

Apr 11 WA0DGW John

Apr 28 KD0UWZ Chad

Apr 25 KB0FH Bob

May 2016

May 2 KD0UWZ Chad

May 9 WA0DGW Joh