

IN-SERVICE

Winter 2010 Volume 37



2010 Board elections

A record 28 ballots were received (~16% participation) by the extended deadline of Sunday, February 28, 2010, surpassing the old record of 24 ballots cast in 2006. Of these, 20 ballots were submitted by E-mail, 7 by postal mail, and 1 by FAX. One ballot was disqualified because the elector's Amateur Radio License expired prior to 1993. No write-in votes were cast. Nine (82%) of the 11 incumbent directors voted. There were 8 nominees for 7 positions in this year's election. Four incumbent directors are re-elected, joined by 3 new members (*) of the Board, receiving from 20 to 27 votes each.

The following are elected to the 2012 directors class:

David Gates, N5LCL, Newcastle, OK
Jim Fish, K7NCG, Woodinville, WA
Larry Ragan, NØAIX, Gladstone, MO
Michael Fletcher, KL7IXI, Omaha, NE
Mike Thayer, KMØS, Jefferson City, MO
Terry Redding, W6LMJ, West Palm Beach, FL

Elected to Bob Farnham's (SK) KGØII term in the 2011 director class:

Dave Atkins WØDZX, Higginsville, MO

Continuing on the board is the 2011 directors class:

Barbara Redding, W5HKY, West Palm Beach, FL
Chuck Palmer, NØONN, Independence, MO (Treasurer)
Doug Shaw, WAØEMX, Raytown, MO (Executive Director & Secretary)
Ernie Miles, WB2UJL, Durham, NC
Robin Cross, WØFEN, Kansas City, MO (President)

We extend grateful appreciation to Tom Thatcher W2TFT and Fred Troeh NØELM, for their many years of service on the board, and to Fred for his long and excellent service as editor/publisher of the *IN SERVICE* newsletter. Thanks also to Brian Fonseca KCØTCM for accepting his first nomination to a strong ballot of those willing to serve on the Board. We also gratefully thank those who included generous donations totaling \$290 with their ballots.

ASCRA 37th Anniversary WØSHQ Special Event Station operation: April 11-17, 2010 -- 00:01-23:59 UTC

Operating frequencies +/- 20 kHz as conditions and available operators permit:

SSB 3.833, 7.233, 14.287, 21.387, 28.387 MHz
CW 3.587, 7.087, 14.087, 21.087, 28.187 MHz
FM WØSHQ/R 146.73(-) no PL, Independence, MO
Echolink: WØSHQ-R #127303 (pending installation)

QSL card requests must include Self Addressed Stamped Envelope sent to: WØSHQ Special Event QSL Card, C/O ASCRA Executive Director P.O. Box 73, Independence, MO 64051-0073

Officers

President: Robin Cross (WØFEN)
Secretary: Doug Shaw (WAØEMX)
Treasurer: Chuck Palmer (NØONN)
Exec Director: Doug Shaw (WAØEMX)

Silent Auction

To date, no specific items have been donated to the silent auction proposed for the General Membership Meeting.

If you wish to donate items, inform the Doug Shaw as soon as possible with the type, quantity and estimated value.

We will consider holding the silent auction only if there is sufficient interest and number of items indicated in advance to make the effort worthwhile.

Regardless of whether an auction is held, donations-in-kind have been and will continue to be gratefully accepted. If not needed or usable at WØSHQ, items have been loaned or sold to members (to new and particularly to young licensees when possible) or offered for sale at area hamfests, swap meets, on-the-air swap nets or Internet sites.

It is our intent to periodically list surplus donated equipment for sale or loan to the membership in the *In Service* and on the ASCRA website.

All donations to ASCRA are tax deductible. Funds will be used to support ASCRA operations, repeaters or other needs.

One project is the expansion of the WØSHQ station, including additional antennas for additional bands, Echolink node and remote internet operation by members around the world.

ASCRA and Emergency Preparedness

By Dave Cook, KCØMHT

ASCRA member and O.M.E.G.A. co-founder

Since 2003, I have been working in partnership with a number of friends and associates who have merged the Emergency Communication of an Amateur Radio Emergency Services (ARES) and the Disaster Recovery mind set of the American Red Cross. In North Central Region of Colorado (NCR), we had to form an Organization called O.M.E.G.A.

Organizational Management for Emergency General Activity, O.M.E.G.A., was organized exclusively for the purposes of public safety in order to support emergency response organizations for training and at times of real crisis. This organization is made up of members of ASCRA, the Community of Christ, their friends, and associates.

O.M.E.G.A. patterned its resource pool on that of ASCRA. As more members of O.M.E.G.A. become HAM's, they are encouraged to also join ASCRA.

What is the NCR? It was formed as the local FEMA representative. The Colorado North Central All-Hazards Emergency Management Region (NCR) is one of nine emergency preparedness and response Regions within the State of Colorado. The NCR is organized around ten counties (and their cities, districts, towns and municipalities): Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin and Jefferson.

Since 2003, O.M.E.G.A.'s strategy has been a blend of teaching HAM Radio and the Community Emergency Response Team (CERT) curriculum from FEMA.

CERT is the Community Emergency Responses Team. The concept was developed and implemented in Los Angeles, California in response to earthquakes. The Federal Emergency Management Agency, recognized the importance of the program, and expanded the CERT materials to cover all hazards. Individuals trained in CERT methods and techniques benefit by being better prepared to respond to and cope with the aftermath of a disaster.

Disaster response skills, such as fire safety,

search and rescue, team organization and disaster medical operations.

The CERT educates and trains people in basic search and rescue, team organization and disaster medical operations. CERT members assist others in their community or workplace following an event when professional responders are not immediately available to help. CERT members are also encouraged to support emergency response agencies by taking a more active role in emergency preparedness projects in their community.

It's about readiness, people helping people, rescuer safety and doing the greatest good for the greatest number. During an emergency and disaster situations citizens are initially on their own and their actions can make a difference. Through training, citizens can manage utilities and put out small fires; help injured by opening airways, controlling bleeding and treating for shock; provide basic medical aid; search for and rescue victims safely; and organize an effective recovery.

Following a major disaster or emergency, public safety personnel may not be able to meet all of the demands for services required. The number of victims, communication failures and road damage may prevent people from accessing emergency services through 911. People may have to rely on each other for immediate life saving and life sustaining needs.

For more information, visit the [CERT](#) website.

O.M.E.G.A. has conducted 11 Regional Exercises (100-200 participants), six CERT classes, and three Ham Radio Technician classes this year alone.

The participants discovered that the O.M.E.G.A. members were ham radio operators and that the knowledge of Morse code was no longer required. Then they wanted to know when the next ham radio class would be scheduled. Normally we schedule a class or two after each exercise.

For more information about O.M.E.G.A., please visit: <http://www.omegaresponders.org>

O.M.E.G.A. looks forward to future partnership with ASCRA.

Net Check-ins

These are the check ins on the 20 meter and 40 meter nets since Dec 10, 2009. Conditions on 20M have improved. More ASCRA stations are being heard now.

20 meter net

NOAIX Larry Reagan
 KD0APS Samuel Merriman
 W0DZX David Atkins
 W0FEN Robin Cross
 KA0GFC Charles Brady
 WA0IBS Andy Ferrar
 NO1K William Smith
 KD0ISJ Michael Williams
 NOJHX Gary Martin
 KN0LMO David Kirk
 KM0S Mike Thayer
 W0SHQ ASCRA Doug Shaw
 W0TGB Richard Burton
 KA0UTA Sharon Fletcher
 NOWZH Steve Hampton
 KB1MGG Stephen Farley
 KB1RON Daniel Hass
 WB2IOL Elan Portnoy
 KB2KWD Michael Pituley
 KC2LXD Rodney Pressley
 KC2RBT Richard Devries
 KA2RMF Gary Bellesheim
 KC2ULV Gary Lubrano
 WB2UJL Ernie Miles
 N3FQ Lawrence Fleming

AB3JC John Campbrell
 VA3RZ Ray Else
 VE3SCP Scott Price
 W4HI Bruce Marron
 WP4BKJ Jose Diaz Pedrosa
 KJ4OBB Ydelisa Calvo
 KG4PJG William Lutz
 KA4RUR Frederick Carslick
 KG4SZS Bil Keenanville
 KI4UMN Billy Copeland
 KD4ZW George Adkins
 KB5EAG Terry Redding Jr.
 WB5CVC Gillis Bartles
 KB5DHM Wallace Klingaman
 K5FLI John Mutter
 W5GGO Sidney Gray
 N5LCL Paul Gates
 K5SHY Robert Kula
 N5SWE Roy Dickinson
 WE5T Robert Glosup
 KC5CYY Paul Goulet
 PP5ZB Ronildo Pimentel
 W5CZI Willie Mc Laughlin
 K5FCB Robert Means
 KE5LDX Donald Reisert
 W5LN Carlos Hamm
 N5NXX Norman Cross
 N5OTI Merryl May
 W5QPT Ellis Thatcher
 KD5RWR Joey Schoefler
 KE5SDN Mark Wagenhoffer
 N5XPZ Billy Daniel
 W5WMB William Barrett
 W6AQC Roger St Laurent
 WB6CAN Phillip Stacy

W6DY
 W6ECB
 K6IPM
 W6JPP
 W6LMJ
 K16LUK
 VA6NLS
 AF6OH
 K6RCF
 K16RRZ
 KH6ST
 N6TUA
 K16UHI
 K6ZP
 KF7EKB
 KF7FKG
 W7FYV
 KE7GD
 KE7GRI
 KL7IXI
 K7NCG
 K7RTH
 WA7TBP
 KE7TD
 K7TSV
 KC7XC
 EA8/PA7ZEE
 3B8GT
 NM8D
 McGoughan
 KD8GVO
 W8JVP
 KD8KDM
 K8QA
 K8QH
 KC8VHA
 KC9CRM

Joe Parker
 Eddie Bartolome
 Alan Childs
 John Parks
 Terry Redding
 Frank Redick
 Neal Sunderland
 William Conklin
 Richard Flowerree
 Tim Carney
 Robert Ramsay
 Alan Cole
 Arnildo Magtira
 Dale Farmer
 Randy Stagers
 Paul Rice
 William Merritt
 Andrew Morris
 Anthony Hamel
 Michael Fletcher
 Jim Fish
 William Herberg
 George Needham
 Paul Prenovost
 Timothy Rierden
 Donald Garlick
 LeRoy Sandstrom
 Geert Paulides
 Alexey Averkin
 Michael
 Phillip Vasquez
 Kenneth Irish
 Michael Bowlus
 Michael Oiler
 David Hayhurst
 Richard Parker
 Jacob Saverynski

K9KTO Edward Platkin
 KC9MAP Tom McDaniel
 W9UTS Richard Gill
 K9YV Robert Painter
 ~~~~~  
 40 M net  
 N0AIX Larry Reagan  
 W0DZX Dave Atkins  
 W0FEN Robin Cross  
 KA0GFC Charles Brady  
 WA0IBS Andy Ferrar  
 KM0S Mike Thayer  
 N0WZH Steve Hampton  
 KC2GZY Allan Paul  
 KB2KWD Michael Pituley  
 WB2UJL Ernie Miles  
 N3FQ Lawrence Fleming  
 VA3RZ Ray Else  
 VE3SCP Scott Price  
 WP4BKJ Jose Diaz Pedrosa  
 WA4EOC Cherokee Co. Club  
 N4KLG Kenneth Garrett  
 KA4RUR Frederick Carslick  
 KD4ZW George Adkins  
 KD5BCM Glenn Yerger  
 KB5DHM Wallace Klingaman  
 KB5EAG Terry Redding Jr.  
 KA5GCB Bradford Jackson  
 K5RY Charles Alexander  
 KX5T OKC Club  
 KE5TGZ Charles Rouse  
 W5WMB William Barrett  
 VE6AGE Denis Gagnon  
 W6LMJ Terry Redding  
 KL7IXI Michael Fletcher  
 N9FME Gregory Coady  
 N9GCG Philip Roberts

# ASSOCIATED RADIO

Serving the amateur radio community for over 60 years. Let our experienced staff offer suggestions to meet your particular emergency communications needs. From low profile HF stations to field portable HF/VHF/UHF operations, we can put you on the air. (And your neighbors need not know!)

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**[www.associatedradio.com](http://www.associatedradio.com) [sales@associatedradio.com](mailto:sales@associatedradio.com)**

# Association of Saints Church Radio Amateurs

## World Conference Meetings, Saturday, April 10, 2010

The ASCRA general membership meeting will be held Saturday, April 10th. Join us at 09:00 AM Central Time at the Gudgell Park congregation, three blocks east of Noland Road at 500 East Gudgell, Independence, MO 64055 (Pastor Michael Hahn KGØXU, 816-521-4069). Talk-in frequency is 146.73 MHz using ASCRA's WØSHQ 146.13/73(-) repeater (no PL). The meeting should begin no later than 09:30 and should last no more than two hours. Our guest speaker will be Mark Widner KCØUMZ, Independence/Eastern Jackson County Emergency Preparedness Manager.

**The general membership only meets every three years**, during World Conference, so this is your chance for eyeballs with other members you may have never met.

From the ASCRA President,

I recently found out that I will not be able to attend the ASCRA Membership meeting at Conference. I deeply regret this. I also will not be able to attend the ASCRA Board meeting as well. I will be out of town at a business conference. I was planning on unveiling a not so new direction for ASCRA.

The following is copied from the ASCRA By-Laws.

The purposes of the association are:

1. To establish, maintain, support, and operate an association of persons commonly interested in amateur radio communication, and
2. To legally utilize communication skills and the licenses granted to service our community and, in this way, lessen the burden of government, and
3. To legally utilize communication skills and the licenses granted to service any religious and charitable organization and in this way lessen human suffering, and
4. To provide for mutual improvement through the various teaching skills, to foster the professional competence of the amateur radio licensee, and to promote the performance responsibilities, ethics, and general educational level of the amateur radio licensee, and
5. To conduct and encourage scientific research and investigation into the radio and electronics art, and
6. To do all and everything necessary, suitable, and proper for the accomplishment of the forgoing purposes and anything which the Board of Directors of the Association may deem conclusive or expedient for the proper conduct of the Association and for the carrying out its purposes.

Historically ASCRA has been mostly used for fellowship. While there is nothing wrong with this, recently there have been two natural disasters that have impacted The Church. These were the earthquakes in Haiti and Chile. Item number 3 in the Purpose is what this is about.

Many years ago ASCRA representatives set up an Amateur Radio Station in Honduras. To the knowledge of all ASCRA Members the equipment and antenna are still in place although more than 20 years old. The Executive Director -Doug Shaw WAØEMX- at my direction is formulating a policy and means of distributing donated equipment more equitably while also bringing income to ASCRA.

The additional funds will be used to set up first an Emergency-GO-KIT (EGK). Secondly, depending on the jurisdiction more permanent installations will be considered. The purpose of the EGK will be to be able to be shipped to a needed location where support communications is urgently needed.

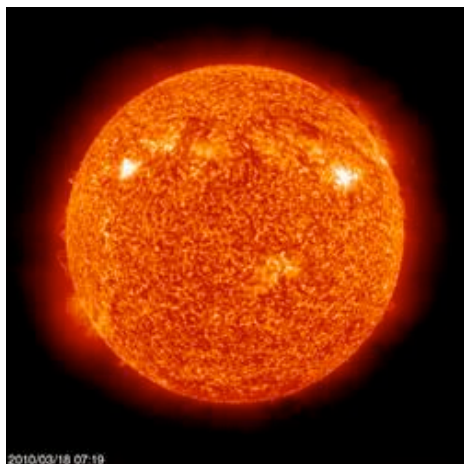
The other part of the equation is that Amateur Operators are needed in the affected area. Reciprocal operating permits must be secured. It would be best if full time inhabitants of the area are licensed by the local Authorities equivalent to the FCC.

There are many details to be worked out.

Robin Cross, WØFEN



# Solar update



Tad Cook, K7RA, reports: Solar activity recovered nicely from the March 6-9 frightening absence of sunspots, reminiscent of years prior to the end of November 2009. For our

reporting week -- March 11-17 -- the average daily sunspot numbers increased relative to the prior week by 17 points to 29.4; the average daily solar flux was up by 9 points to 87.6. A new sunspot group -- 1055 -- appeared on March 11, following the appearance of 1054 the day before.

Group 1055 only lasted a couple of days and another new spot, 1056, emerged on March 17 and is still visible and active. On March 11-12, a solar wind met a south-pointing interplanetary magnetic field (IMF) and pushed geomagnetic instability, especially pronounced at higher latitudes. Alaska's college K index at Fairbanks went to 5 during several 3-hour readings over both days. So far in March, the average daily sunspot number is 23.9. Every month of March since the end of the last

century, the average (1999-2009) was 100.5, 203.6, 166.7, 154.3, 119.7, 81, 41, 21.3, 9.8, 15.9 and 0.77. Sobering, isn't it? And no, that isn't an error for 2009. March of last year had sunspots on only two days -- March 6-7 -- pushing the average for the month to less than one. March 20, was the vernal equinox, the first day of spring, which began at 1732 UTC. Both the southern and northern hemispheres were bathed in an equal amount of sunlight; the time around the spring and fall equinox is great for HF propagation.

Look for more information on the ARRL Web site.

For more information concerning radio propagation, visit the [ARRL Technical Information Service Propagation page](#).

## FCC seeks comments to allow amateur radio in hospital emergency drills

In February 2010, the American Hospital Association (AHA) filed a request with the FCC for a blanket waiver of Section 97.113(a)(3) of the Commission's Rules to permit hospitals seeking accreditation to use Amateur Radio operators who are hospital employees to transmit communications on behalf of the hospital as part of emergency preparedness drills.

On March 3, the FCC issued a Public Notice -- WP Docket 10-54 -- seeking comments if the Commission "should grant AHA's request for a blanket waiver of Section 97.113(a)(3) to permit amateur operators who are hospital employees to participate in emergency drills that are conducted by hospitals for accreditation purposes and that are not government-sponsored." Section 97.113(a)(3) specifically prohibits amateur stations from transmitting communications "in which the station licensee or control operator has a pecuniary interest, including communications on behalf of an employer."

Given the public interest in facilitating government-sponsored emergency preparedness and disaster drills, the Wireless Telecommunications Bureau and Public Safety and Homeland Security Bureau have provided a process for requesting a waiver of Section 97.113(a)(3) to permit named Amateur Radio operators to participate in specified government-sponsored drills by transmitting messages on behalf of identified employers. The waiver must be requested prior to the drill, and employees may not transmit amateur communications on their employer's behalf unless the waiver request has been granted by the FCC. According to AHA, waiver relief should be available for these non-government-sponsored exercises "because it is in the public interest to ensure that hospital communications operate effectively during emergencies." The FCC noted that in its blanket waiver request, the AHA also stated that requiring separate waiver requests would be administratively

burdensome on hospitals and the Commission. "AHA thus requests a blanket waiver for hospitals seeking Joint Commission accreditation, until such time as the Commission adopts a final order in response to a forthcoming Notice of Proposed Rulemaking that will seek comment on potential changes to Section 97.113(a)(3)," the FCC said.

AHA states that hospitals seeking accreditation from the Joint Commission (formerly the Joint Commission on Accreditation of Healthcare Organizations) must prepare an emergency operations plan setting forth how the hospital will communicate during emergencies, and establish back-up communications links (which, among other means of communications, may include amateur radio stations) to communicate essential information if primary communications systems fail. "AHA states that hospitals seeking accreditation also are required to test their emergency operations plans twice annually."

# SKYWAVES

by Doug Shaw WAØEMX  
ASCRA Executive Director

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## WØYO Graceland University Amateur Radio Club Demo at 2009 Homecoming

Steve Murdock NØZY, faculty sponsor and WØYO Trustee, reports that "We had an organizational fair for clubs last September but only one (new) person showed any interest in Ham Radio. We don't have an antenna up, and its placement is part of ongoing discussion here at Graceland University. This is going to be a building-up year for Amateur Radio here at Graceland.

"We operated a VHF demonstration station in the new science building at Homecoming to showcase WØYO (and Ham Radio). We are trying to drum up interest in a licensing class. I will try to string up a wire antenna for HF until we can get a beam up somewhere. The physical plant wants to put it up on an existing tower on Zimmerman, but we are unable to locate operating space so far there. I am lobbying for putting it up on the science hall again so we have more control over it, but physical plant is very wary of "messing up" the new building, so stay tuned for the ongoing adventures of Ham Radio at Graceland. We are considering all options, including a vertical multi-band for HF, obviously less effective than the beam, but less obtrusive if we can hide the radials!"

Using a PC built and donated to the cause by Bob Farnham's son-in-law, Brian Fonseca KCØTSM, the WØYO-R Echolink node (127318) returned to operational status in October just before Homecoming which helped make the VHF demo at

Homecoming successful, at least as viewed from Independence, MO, and surroundings. Doug Shaw, WAØEMX was able to contact the WØYO demo station using a 300 mw handi-talkie via the Raytown, MO KØGQ (145.17-) repeater and KØGQ-R Echolink node #403841.

Other stations contacted during the demonstration were not reported to ASCRA. However, numerous other contacts were made using a WØYO VHF transceiver during the demo by Steve Murdock and David McDermid KCØYFR, a Graceland student from Joplin, MO. See Steve's article elsewhere in this issue describing the procedure used to access the EchoLink node via the WØSHQ (13/73) repeater in Lamoni. (It does vary from that used on many other EchoLink repeaters.)

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## WØSHQ RFI to Auditorium Smoke and Fire Alarm Sensors Resolved

On Friday, 02 January 2010, ASCRA Executive Director Doug Shaw and WØSHQ Trustee Robin Cross met with Hugh Wells of headquarters security to test the Auditorium smoke and fire alarm sensor for RFI which caused "problem reports" during some previous operating sessions over the past year. The tests were performed using the new Ten-Tec Jupiter transceiver and Alpha 374 linear amplifier driving the TH6 yagi antenna mounted on a tower 30 feet above the southeast roof of the building, where it has been located for over 35 years. No known problems have been reported while using the ICOM 721 transceiver when driving either the Alpha 374 or a Collins 30L-1 linear

amplifiers. The main difference may be the fact that the Jupiter provides no ALC connection to the amplifiers.

Only one sensor, located in the ceiling of the hallway just outside the radio room door, tripped to display a problem status. No actual alarms were generated, nor have they been in any of the past incidents. During the incident of April 5, 2009 during the WØC Special Event operation, several sensors triggered problem status on the 4th, 5th and 6th floors. It is believed that the sensor affected during this test had not triggered on previous occasions.

Adjustments to the Jupiter reduced output power to 90% (~90w), mic gain 80%, compression to 70%, and carefully adjusting the transceiver ALC. These settings at on 20, 15 and 10 meter frequencies appeared to alleviate the problem. We have operated the stations at even lower levels since the test with no apparent degradation in transmitted signal. I'll follow up with headquarters Campus Facilities Management and the alarm system vendor to ascertain if the affected sensors meet FCC Part 15 for operation in RF fields, and if not, will attempt to obtain vendor designed RF bypass filters to permanently resolve the problem. If the vendor (Seimens) cannot or will not cooperate, we may suggest using proven treatments (such as toroids or L-C filters, if necessary) to the paired connecting wires to bypass the obviously strong RF fields generated by high power HF transmissions from WØSHQ. For the present, WØSHQ to continue to successfully supporting the Church's emergency communications needs in the decades to come.

# Using the WØYO EchoLink Node via WØSHQ Repeater in Lamoni

by Steve Murdoc, NØZY

Echolink is a network of internet-connected computers around the world, often connected by way of radio link to a local repeater. NØZY (Steve) in Lamoni is currently working to establish a reliable echolink connection to the local WØSHQ repeater. Several configurations of computers and locations have been found to be problematic, and nothing solid and dependable has been found to date, but generally speaking a link is usually possible.

To access the node while in the Lamoni area, tune your radio to the WØSHQ/R frequency of 146.73 (-offset and no PL). Press your PTT, then enter DTMF 11 and then release PTT. If the repeater verbally announces WØYO, you're in business. Press your PTT then enter 13 followed by the node number you wish to connect to and then release PTT. You should then be connected to the desired node or repeater relay. When through with your QSO connection, press PTT followed by 31 then release PTT, and you should be disconnected -- don't forget!!!. To check to see if another station is currently connected, press PTT,

enter 08, release PTT, and the station will announce verbally either "no connection" or give the call sign of any stations connected.

While riding in a car, there is generally no internet available, so it would be a good idea to run the Echolink program on your computer at home and make a written list of node numbers that are of interest to you. Please feel free to connect to our repeater if you are at your home QTH using your computer any time we are up and running. There is a free echolink application available for the iPhone, so it is possible to use that phone to connect to the AT&T network, and use the phone as a "handi-talkie" to connect to any node anywhere in the world wherever there is a phone signal (or WiFi) available. See the echolink web pages for details.

Of course, we want to operate our cars and electronic devices in a safe manner. I wonder what the legislators currently worrying about text messaging when driving would think about a ham sending and receiving morse code while driving with a key strapped to their leg?

-- Cheers, NØZY.

## Radio Club Chile active after earthquake

[IARU Region 2](#) President Reinaldo Leandro, YV5AMH, spoke March 1, via telephone with Radio Club de Chile ([RCCH](#)) President Dr Galdino Besomi, CE3PG. "He informed me that soon after the earthquake, an Emergency Net was activated in the whole country-- first on VHF and then on HF. All the RCCH Board and club members are actively working in close coordination with civil and military authorities,"

Leandro posted to the IARU Region 2 e-mail reflector. "Three days after the earthquake, the requests for news about people in the affected areas was one of the main activities occupying the Chilean radio amateurs."

*Note: Several ASCRA members monitored the international emergency frequencies for both the Chile and Haiti disasters.*

## Are sunspots disappearing?

Nasa reports that the sun is in the pits of the deepest solar minimum in nearly a century. Weeks and sometimes whole months go by without even a single tiny sunspot. The quiet has dragged out for more than two years, prompting some observers to wonder, *are sunspots disappearing?*

"Personally, I'm betting that sunspots are coming back," says researcher Matt Penn of the National Solar Observatory (NSO) in Tucson, Arizona. But, he allows, "there is some evidence that they won't."

Penn's colleague Bill Livingston of the NSO has been measuring the magnetic fields of sunspots for the past 17 years, and he has found a remarkable trend. Sunspot magnetism is on the decline.

While most researchers measure the splitting of spectral lines in the visible part of the sun's spectrum, Livingston decided to try an infra-red spectral line. Infrared lines are much more sensitive to the Zeeman effect and provide more accurate answers. Also, he dedicated himself to measuring a large number of sunspots—more than 900 between 1998 and 2005 alone. The combination of accuracy and numbers revealed the downturn.

"According to our measurements, sunspots seem to form only if the magnetic field is stronger than about 1500 gauss," says Livingston.

"If the current trend continues, we'll hit that threshold in the near future, and solar magnetic fields would become too weak to form sunspots."

"This work has caused a sensation in the field of solar physics," comments NASA sunspot expert David Hathaway, who is not directly involved in the research. "It's controversial stuff." "If sunspots do go away, it wouldn't be the first time.

In the 17th century, the sun plunged into a 70-year period of spotlessness known as the Maunder Minimum that still baffles scientists. The sunspot drought began in 1645 and lasted until 1715; during that time, some of the best astronomers in history (e.g., Cassini) monitored the sun and failed to count more than a few dozen sunspots per year, compared to the usual thousands.

"Whether [the current downturn] is an omen of long-term sunspot decline, analogous to the Maunder Minimum, remains to be seen."

Please send comments or suggestions regarding ASCRA policies or programs to the Executive Director. Send revisions to the membership data base (license upgrades, postal or Email addresses, phone numbers, acceptance of newsletter delivery via email, etc.) to the Secretary... c/o P.O. Box 73, or via email c/o [wa0emx@arrl.ne](mailto:wa0emx@arrl.ne)

Send comments, suggestions, and material proposed for future issues to:

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Secretary: Doug Shaw WAØEMX  
Treasurer: Chuck Palmer NØONN  
Executive Director: Doug Shaw WAØEMX

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