

FEMA ADMINISTRATOR CALLS AMATEUR RADIO "THE LAST LINE OF DEFENSE"

In an FCC forum on earthquake communications preparedness, Federal Emergency Management Agency (FEMA) Administrator Craig Fugate described the Amateur Radio operator as "the ultimate backup, the originators of what we call social media." The forum-- held May 3 at FCC Headquarters in Washington, DC -- brought together officials from the White House, the Department of Homeland Security, the United States Geological Survey, FEMA, the FCC and the private sector.

Later in the forum, Fugate spoke more on Amateur Radio. "During the initial communications out of Haiti, volunteers using assigned frequencies that they are allocated, their own equipment, their own money, nobody pays them, were the first ones oftentimes getting word out in the critical first hours and first days as the rest of the systems came back up," he told the forum. "I think that there is a tendency because we have done so much to build infrastructure and resiliency in all our other systems, we have tended to dismiss that role 'When Everything Else Fails.' Amateur Radio oftentimes is our last line of defense."

Fugate said that he thinks "we get so sophisticated and we have gotten so used to the reliability and resilience in our wireless and wired and our broadcast industry and all of our public safety communications, that we can never fathom that they'll fail. They do. They have. They will. I think a strong Amateur Radio community [needs to be] plugged into these plans. Yes, most of the time they're going to be bored, because a lot of the time, there's not a lot they're going to be doing that other people aren't doing with Twitter and Facebook and everything else. But when you need Amateur Radio, you really need them."

JUNE MEETING

This month's club meeting will begin at 7:00 PM on Thursday June 2 at the Hamburg Youth Center, corner of Prospect and Hawkins Streets.

We'll be finalizing the plans for Field Day!

All interested in amateur radio and/or CERT are invited to attend. Neither club membership nor an amateur radio license is required.

Hope to see you there!

HAPPY JUNE BIRTHDAY!

N2OZE Dave Lawton
KC2LYO Nathan Bangsil



N2MRN — SK

Mike Smith N2MRN
1945-2011

STARS has lost a valued member. Mike belonged to the club for nearly 20 years. He loved ham radio and fixing things. Always with a smile on his face, he was a wealth of knowledge. He will be missed!

2011 CLUB OFFICERS

President: Wayne Carpus W2ZDP
 Vice President: Scott Barto KB2KOL
 Treasurer: Don Niles K2PMC
 Secretary: Keith Patterson KC2DGC
 Financial Secretary: Judy Levan N2TEZ
 Director: Ken Pokigo KC2AYK
 Director: Jon Hall KC2QKB

 Clubhouse Chair: Don Niles K2PMC
 Telstar Editor: Judy Levan N2TEZ
 Webmaster: Marc Fruth N2UBT

CLUB MEETINGS

Club meetings are held on the first Thursday of the month at 7:00PM at either the Hamburg Youth Center (Prospect and Hawkins Avenues) or the NIKE Base Clubhouse. Everyone is welcome. Board meetings are held on the fourth Thursday of the month at the Nike Base Club Station at 7:30PM and are open to all club members.

CLUB NETS

STARS club nets are open to all to exchange information on local amateur radio activities.
 STARS WB2EZU Memorial HF net meets at 10AM local time on Saturdays on 3.925 MHz +/- QRM. Bob Lehning WA2YSJ is usually the net controller.
 STARS Sunday morning RagChew Net at 9:30AM on 28.380 Mhz.
 STARS 2m Sunday morning Net at 10:30AM on the STARS Repeater 147.090

FCC NEWS: FCC SEEKS TO RAISE THE FEE FOR VANITY CALL SIGNS

The FCC released a *Notice of Proposed Rulemaking* on May 3, seeking to raise the fee for Amateur Radio vanity call signs. Currently, a vanity call sign costs \$13.30 and is good for 10 years; the new fee, if the FCC plan goes through, will go up to \$14.20 for 10 years, an increase of 90 cents. The FCC is authorized by the *Communications Act of 1934 (as amended)* to collect vanity call sign fees to recover the costs associated with that program. The vanity call sign regulatory fee is payable not only when applying for a new vanity call sign, but also upon renewing a vanity call sign for a new term.



—ARRL News

PIONEER RADIO OPERATORS SOCIETY — HAMFEST

Saturday, June 11th
 7:00 AM set up
 8:00 AM general public

At: Manion Park, Chaffee Park, Chaffee, N.Y.
 35 miles south of Buffalo,

Just off of NY route 16, turn onto Grove St. at Chaffee sound and electronics and follow the signs.

Contact: Roy KC2LEE at 716-676-3903
 or rschwedt@netscape.com
 or Gary, KB2YAA at 716-592-9554.

Five bucks still gets ya in and a table.!!!



STARS has been designated a Special Service Club by the ARRL.

RIT STUDENTS SUCCESSFULLY LAUNCH HIGH ALTITUDE BALLOON

The Rochester Institute of Technology Amateur Radio Club, K2GXT, had a successful launch of RITCHIE-1 -- a custom high altitude balloon designed by members of K2GXT -- at the Imagine RIT Festival on May 7. According to RITARC Vice President Bryce Salmi, KB1LQC, the goal of the launch was not to reach high altitudes to take images, but to engineer a reliable, modular and reusable payload with good engineering practice. "Saturday's launch went perfect," Salmi told the ARRL. "The launch was streamed live to the Internet and a local television station even produced a segment for their newscast on it." The club won the Academic Award for the balloon at the festival.

Salmi said that the balloon had a custom-made structural frame and foam design that protected it from the -50 degree temperatures. After reaching upwards of 96,000 feet and following the path of the New York Thruway, the balloon burst over Palmyra, New York, about 25 miles east of Rochester. Upon burst, it descended at more than 150 miles per hour until it reached thicker atmosphere. The balloon finally landed in a tall tree in Clifton Springs, about 10 miles southwest of Palmyra. The balloon's camera took several thousand images, which Salmi said were "absolutely stunning. I needed to pry the waterproof case open with a flathead screwdriver since there was still a vacuum inside obtained during the flight."

Salmi told the ARRL that the balloon ended up descending through a thunderhead or storm cell and saw strong updrafts: "Based on data from the balloon's GPS, as well as images from the balloon's camera, I'm pretty sure that hail forced the balloon upwards another 1723 feet when it was between 6,000-7000 feet for a short duration. I have never heard of this happening before to a high altitude balloon."

Salmi said that the electronics worked "flawlessly. One club member largely designed the electronics system and PC boards, while K2GXT club members



etched the double-sided PC boards. The TI MSP430 firmware that controlled the remote command capabilities -- including the nichrome wire cut-down system and light/sirens that several members programmed -- also performed amazingly. We had a group of other members who designed the microcontroller code, another group that designed the online web presence and another member that designed the radar reflector and others were there to help out with various aspects of the design." The K2GXT ground crew could even command it remotely to transmit its GPS coordinates on command while in flight, turn the beeper/LEDs on and off and change between flight modes in-flight via DTMF code sequences.

"In the end, our club pulled off an incredible high altitude balloon flight, especially for its first try," Salmi explained. "I honestly think we had one of the largest, most technical (yet our presentation was easily understandable) and interesting exhibits at ImagineRIT. Visitors could view the balloon's location on a display using *Google Earth*. Many of the visitors were amazed that we were using ham radio to do this!"

Watch a video of the launch can be found on you tube at: <http://www.youtube.com/watch?v=bD7ncaYpSTs>



NATIONAL HURRICANE CENTER'S WX4NHC SCHEDULES ON-THE-AIR STATION TEST

The annual [WX4NHC](#) On-the-Air Station Test from the National Hurricane Center ([NHC](#)) in Miami will take place Saturday, June 4, 1300-2100 UTC (9 AM - 5 PM EDT).

"The purpose of this annual station test is to test all of our radio equipment, computers and antennas using as many modes and frequencies as possible in preparation for this year's hurricane season," said WX4NHC Assistant Amateur Radio Volunteer Coordinator Julio Ripoll, WD4R. "This is *not* a contest or simulated hurricane exercise."



WX4NHC will be on the air on HF, VHF and UHF, plus 2 and 30 meter [APRS](#). Suggested SSB frequencies are 3.950, 7.268, 14.325, 21.325 and 28.525 MHz, +/- QRM. Ripoll said that WX4NHC will mostly be on 14.325 MHz, but will make announcements when the station changes frequencies. WX4NHC also will be on the [VoIP Hurricane Net](#) 1700-1900 UTC (IRLP node 9219/EchoLink WX-TALK Conference) and on South Florida area VHF/UHF repeaters and simplex. Stations looking to participate in the annual station test may be able WX4NHC on HF by using one of the DX spotting networks, such as the [DX Summit website](#).

Stations working WX4NHC exchange call sign, signal report, location and name, plus a brief weather report, such as "sunny," "rain" or "cloudy." Non-hams may submit their actual weather using the On-Line Hurricane Report Form. QSL cards will be available. QSL via WD4R and include a self-addressed, stamped envelope. Do not send cards to the NHC. Due to security measures, no visitors will be allowed at NHC during the test.

The 2011 Atlantic hurricane season begins Wednesday, June 1 and goes through November 30. According to the NHC, forecasters are calling for an "above average" hurricane season this year.

SUCCESSFUL VE SESSION

STARS held a VE Test Session on Saturday May 21st at the Hamburg Youth Center. The session was led by John KB2VWC with VEs Ed N2ING and Jim N2TFA.

John reports four very successful candidates:

Terry Reigle took the Technician test, aced it and took the General—passed that with flying colors!

Jason Tojdowski KC2QVQ, a General, took the Extra test and passed.

Stephen Luczkowiak and Kenneth Sporysz both passed their Technician tests.

Congratulations to all! As provided by our by-laws, Joe becomes a non-voting Associate member of STARS for 2011. Welcome to STARS!

The next VE Session is scheduled for July 16th. For more information, or to register for the test, contact John Crawford KB2VWC 649-5933.

AMATEUR RADIO IN SPACE: CELEBRATING 50 YEARS OF OSCAR I AND AMATEUR RADIO SATELLITES

By ARRL News Editor S. Khrystyne Keane, K1SFA

1961. It was the middle of the Cold War. John F. Kennedy is inaugurated as the 35th President of the United States. The Bay of Pigs invasion fails in Cuba. The Beatles perform for the first time at the Cavern Club in Liverpool. Freedom Riders are arrested in Jackson, Mississippi for "disturbing the peace" after disembarking from their bus. Construction of the Berlin Wall begins. Roger Maris of the New York Yankees hits his 61st home run in the last game of the season, beating the 34 year old record held by Babe Ruth. Barbie gets a boyfriend when Mattel introduces the Ken doll.

Just four years earlier, the Soviet Union had launched *Sputnik I*, the first human-made object to

(Continued on page 5)

orbit the Earth, ushering in the Space Age. For the next 30 years, the Cold War rivalry between the US and the former Soviet Union focused on attaining firsts in space exploration. These were seen as necessary for national security and symbolic of technological and ideological superiority. The "space race" involved pioneering efforts to launch artificial satellites, sub-orbital and orbital human spaceflight around the Earth, as well as piloted voyages to the Moon.

1961. Mercury-Redstone 2 launches into space carrying Ham the Chimp. Soviet cosmonaut Yuri Gagarin becomes the first human in space. Alan Shepard becomes the

first American in space aboard Mercury-Redstone 3. Gus Grissom, piloting the Mercury-Redstone 4 capsule Liberty Bell 7, becomes the second American to go into space. OSCAR I -- Orbiting Satellite Carrying Amateur Radio -- the very first Amateur Radio satellite, is launched into space.

Barely four months after the successful launch of Sputnik I, the United States launches the unmanned Explorer I on January 31, 1958. At about that same time, a group of hams on the West Coast -- Lance Ginner, K6GSJ; Chuck Smallhouse, W6MGZ; Ed Beck, K6ZX; Al Diem; Chuck Townes, K6LFH (SK), and Nick Marshall, W6OLO (SK) -- begin toying with the idea of launching an Amateur Radio satellite into orbit and organized themselves into Project OSCAR. After a series of high level exchanges among Project OSCAR members, the ARRL and the US Air Force, a launch opportunity on a Thor DM-21 Agena-B rocket from Vandenberg Air Force Base in California was secured for the very first Amateur Radio satellite: *OSCAR I*. It was successfully launched into a low Earth orbit on the morning of December 12, 1961 -- four years after the launch of Sputnik I. The satellite was also the world's first non-government bird.



Launched into space on December 12, 1962, OSCAR I was the first Amateur Radio satellite -- and the first non-government bird -- to go in to space. [Photo courtesy of AMSAT]

Fifty years -- 1961 to 2011 -- is a long time -- and an important milestone, thought ARRL Lab Test Engineer Bob Allison, WB1GCM. And then he had a lightbulb moment: Why not take the back-up OSCAR I on display at ARRL Headquarters and make it work again? So W1AW Station Manager Joe Carcia, NJ1Q and Allison began tinkering with the satellite, one of three made by Project OSCAR. One of the satellites went up into space in 1961, one is on display at the Smithsonian Air and Space Museum in Washington, DC and the other was until recently sitting in a display case on the first floor of the HQ building in Newington.

After much trial and error, Carcia finally got OSCAR I to transmit a signal on 145 MHz, just as the original satellite did. "Since specific technical literature on the satellite was unavailable, information taken from 1962 *QST* and *CQ* articles assisted in the reconstruction of the transmitter in the ARRL unit," Carcia explained. "Much care was given to salvage the original components, although time had taken its toll on most of the circuitry. As such, although the transmitter functions, the actual keying of the transmitter is performed using a PIC beacon keyer. Power is supplied using a standard wall-cube providing 12 V dc." The satellite was on display at the Dayton Hamvention.



ARRL Lab Test Engineer Bob Allison, WB1GCM, holds a newly functional OSCAR I. The satellite is shown with its cover open to the left, making the bird appear twice as large as it actually is.

ARRL Field Day
2011

ARRL Field Day
June 25-26, 2011

Amateur Radio's
most popular on-air
operating event!

The Rochester Hamfest and ARRL Atlantic Division Convention

"The Legacy Continues"

Saturday June 4, 2011



Gates open at 8AM

Where: 360 Maiden Ln - Rochester 14616

\$5.00 admission

\$5.00 unlimited flea market space!

Kids 16 and under FREE with paying adult.

Serving Breakfast & Lunch

Hot Breakfast & Lunch sandwiches starting at only \$2.00!

Don't miss our "Last Chance" AUCTION at 2pm!

Talk-in: 146.61 & 444.45

(pl 110.9)

Open Wi-Fi

ARRL Forum

Take a tour of our feature display:

Monroe County's Emergency Mobile Command Center

NOAA SKYWARN
Training

VE Testing
starting at 9AM

QSL Card Checking

Indoor Commercial Vendors

(There will be dozens of commercial vendors exhibiting in our outdoor flea market area that are not listed here.)

Flex Radio Systems - Kanga US - K2JD Engraving - Key Source Technologies - Quicksilver Radio Products

Sauder Electronics - Batteries America - Light Beam Antennas - OHM Electronics - T-Mobile

See our website for program information, directions, maps!

www.RochesterHamfest.com