

## RESET RESTORES AO-40 TRANSMISSION

Merry Christmas, AMSAT--AO-40 is back! Following a 12-day silence, AO-40 once again is transmitting telemetry. In response to an L-band command sent Christmas Day by command station ZL1AOX, AO-40 resumed transmitting on 2.4 GHz. Software was reloaded to permit telemetry transmissions on 2401.305 MHz. Some problems remain on the satellite, however.

"Recovery of AO-40 continues, and some housekeeping tasks were performed by the command stations to improve and stabilize the situation," said Peter Guelzow, DB2OS, of the AO-40 team. Guelzow says new software routines were loaded successfully to restore the battery-charge regulator system and other housekeeping functions. "We will now start a detailed analysis of the situation," he said.

Telemetry transmissions from AO-40 ceased December 13 while ground controllers were testing the onboard 400-Newton propulsion system following an initial orbital shift. Some observers feared the satellite had been irreparably damaged. Guelzow says ground stations now have regained control of the satellite. Ground controllers hope the telemetry might yield some clues about what went wrong aboard the satellite to make it stop transmitting. After onboard software watchdog routines failed to restart

beacon transmissions automatically, a full reset command and an initialization block to switch on the S2 S-band transmitter were sent via L-band.

Guelzow said telemetry revealed that some temperature sensors have failed and some current sensors indicated incorrect values, but solar sensors seemed to be working fine. The good news was that AO-40's power situation--in particular the battery voltages--looks nominal.

Guelzow said additional software would be loaded in the next few days and the various uplinks checked out before any attempts are made to turn the 2-meter transmitter back on. "Clearly, we need more time to analyze and understand what has happened here," Guelzow said. He said that while there are no indications that the 2-meter beacon transmitter has failed, ground controllers don't want to risk losing communication again. "So for the next days the spacecraft will continue to be transmitting on S-Band only," he said.

Phase 3D Project Leader Karl Meinzer, DJ4ZC said AO-40 command stations "will continue to follow a conservative philosophy" with a primary goal of not causing additional damage while retaining as much evidence as possible to analyze what made the beacon transmissions stop.

On December 22, AMSAT proposed holding an inquiry into the incident that led to the loss of communication with AO-40. A letter from AMSAT-NA President Robin Haighton, VE3FRH, said "AMSAT believes that it is in the best interests of our organization to determine all the facts surrounding this incident and to make sure that a similar situation cannot happen again either on AO-40 or on a future satellite."

### KID'S BOOK

Ham call signs turn up in kids' book: When Laurel Parker, KA1WJL, spotted the Amateur Radio call sign N1IQB in a children's book, *The Wanderer*, it piqued her curiosity. So, she wrote to Newbery Medal-winning author Sharon Creech and to Wayne Grabowski of Spencer, Massachusetts, who holds N1IQB, to find out more. As Parker explained in a note to the ARRL: "Neither of them knew each other, and the author had just more or less made up the call and hoped that if it did belong to someone that they would be flattered that their call had been used. The other call that she used (WB2YPZ) is not an active call at this time." *The Wanderer* is a tale of growing up and self-discovery surrounding a young teenaged girl, Sophie, who journeys across the Atlantic on a sailboat accompanied by her adoptive mother's three brothers and two nephews.

## RUSSIA TO DUMP MIR

Russia now appears resigned to dump its Mir space station. After much waffling and after announced plans to commercialize Mir fell through, the Russian government voted this week to deorbit the aging space station that for more than a dozen years has been the pride of the Russian space program.

Current plans call for Russia to deorbit Mir in February. Yuri Koptev, the head of the Russian space agency, said the Russian government has agreed that Mir would be taken out of orbit and brought down into the Pacific Ocean in a predetermined area off Australia between February 26 and 28.

Mir has been the focus of Amateur Radio activity from space by cosmonauts and US astronauts--including several contacts with schools. Amateur Radio communication from US astronauts was able to fill in details of a nearly disastrous fire and after a collision with a Progress rocket nearly decompressed Mir.

Koptev said an unmanned cargo ship sent to Mir early next year will fire its rockets to push the space station quickly into the atmosphere. Koptev said Mir was in too poor a state of repair to remain in orbit much longer.

This week's decision signals the end of an era for Russia's cash-strapped space program, and defeat for the private MirCorp, which had tried to raise millions of dollars to keep Mir in operation. American businessman Dennis

Tito, who had hoped to travel to Mir as a "space tourist" under a deal with MirCorp and has already spent \$1 million in train-

ing, will not be sent to the station, Koptev said.--from news reports

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## BOARD TO CONSIDER MORSE CODE POLICY REVIEW

The ARRL Board of Directors will review the League's position on the Morse code as an international licensing requirement when it gathers for its annual meeting in January. Because the issue is expected to come up at the IARU Region 2 Conference next October, the ARRL Executive Committee decided at its November 11 meeting in Irving, Texas, to place the issue on the Board's January agenda.

The ARRL's Morse policy was formalized by Board resolution in 1993. It supports the retention in the International Radio Regulations of the provision obliging administrations to require that applicants demonstrate ability to send and receive Morse code before they may operate below 30 MHz. Consistent with that policy, ARRL International Affairs Vice President Rod Stafford, W6ROD, cast the lone dissenting vote earlier this year at the IARU Region 3 Conference in Australia on a motion calling for the eventual elimination of Morse as an ITU requirement for HF operation.

In January, the Board may decide to reaffirm this policy, to modify it, or to seek additional input from members. In the past, a majority of members has supported the policy.

The Executive Committee also proposed that the Board determine a process for soliciting membership input on possible repartitioning of the HF bands in restructuring's wake. As part of its original restructuring package, the League had proposed "re-

farming" the current Novice bands to allow for more efficient use of the most crowded HF allocations. The FCC has declined to take up any possible repartitioning, however, until it's had a chance to gauge the effects of restructuring. Amateur Radio license restructuring became effective last April 15.

In other action, Stafford and ARRL Executive Vice President David Sumner, K1ZZ, reported briefly on preparations for WRC-2003. Stafford is focusing on developing support for the Amateur Radio 7 MHz position within Region 2. The IARU seeks a 300-kHz worldwide amateur allocation in the vicinity of 7 MHz. Sumner has been named to the core IARU delegation to that conference.

The Executive Committee also heard a wide-ranging update of other FCC matters, including the League's efforts to gain primary amateur status at 2400 to 2402 MHz and at 2300 to 2305 MHz.

Sumner observed during the meeting that the Amateur Radio Spectrum Protection Act bills--HR 783 and S 2183--were not likely to be enacted during the "lame duck" session of Congress that's just ahead. Principal sponsors of both bills are returning to Congress in January and may be asked to reintroduce the legislation.

The Executive Committee also briefly discussed legislative restrictions on the use of cell phones that have been popping up in various localities. Hudson Division Director Frank Fallon, N2FF, noted that an effort is under way in New Jersey to exempt Amateur Radio operation from the effects of such legislation.

## ARRL's FIRST CONTINUING EDUCATION COURSE FILLS PROMPTLY

Sorry, but this class is filled! All "seats" for the ARRL's introductory-level on-line emergency communications course were taken within 24 hours of opening registration. ARRL Certification Specialist Dan Miller, K3UFG, announced December 15 that registration for the ARRL's new on-line Amateur Radio Emergency Communications Course has closed.

The ARRL is the first organization to offer a Web-based Amateur Radio Emergency Communications course that qualifies for continuing education course credit. Students lucky enough to get registered have up to eight weeks to complete the interactive course, Level I: Introduction to Emergency Communications. The ARRL will award a certificate bearing a handsome, distinctive logo to those completing the course. The logo may be displayed on QSL cards or stationery.

Starting in 2001, ARRL will offer its on-line course as an in-person class to be held at various sites throughout the US. Advanced courses in emergency communications also will become available next year. These include Level II: NCS and Liaison Training and Level III: Emergency Communications Management/Administration Issues.

Miller says he'll announce registration for future course offerings within the next few weeks. He also will maintain a file with the names and e-mail addresses of those requesting prior notification. Anyone wishing to be added should send name, call

sign and e-mail address to [CCE@arrl.org](mailto:CCE@arrl.org).

Many individuals and organizations, including Red Cross national officials, have expressed keen interest in the course. In the imitation-is-the-sincerest-form-of-flattery department, REACT International has designed a similar course based on the ARRL's and tailored specifically to its members' needs--but the REACT course is not available on-line.

The ARRL Board of Directors approved the development and implementation of the self-education Continuing Education and Certification Program for radio amateurs at its January meeting. The program is aimed at inspiring amateurs to continue to acquire technical knowledge and operating expertise beyond that required to become licensed.

For more information on the ARRL Certification and Continuing Education Program, contact ARRL Certification Specialist Dan Miller, K3UFG, [cce@arrl.org](mailto:cce@arrl.org).

## TAXIS IN SPACE, 20- METER TICKS CHALLENGE INTRUDER WATCHERS

Interference to the AO-27, UO-14, SO-35 and possibly other Amateur Radio satellites tentatively has been traced to taxi fleet transmissions from south of the US border. "The stations appear to be unlicensed Mexican taxi operators operating in the satellite uplink portion of the band," said Brennan Price, N4QX, of the ARRL Monitoring System. AMSAT News Service reports that severe interference from other allegedly unlicensed Spanish-speaking stations continues on 145.850 and 145.825

MHz and transmissions were being picked up by UO-14 and SO-35.

"Since VHF signals don't go so far, except via satellite, finding these folks is tough," Price said.

IARU Region 2 Monitoring System Coordinator Martin Potter, VE3OAT, reports that one signal source in Mexico that was interfering with the AO-27 uplink was located, thanks to intervention from FMRE, the Mexican IARU society. FMRE reported the situation to COFETEL, the Mexican telecommunications authority. COFETEL made the taxi drivers move away from the AO-27 uplink, but taxi operations continue on other 2-meter frequencies, and AO-27 was still experiencing similar interference at last report.

Meanwhile, the FCC tentatively has identified a mysterious "tick-tick" intruder signal as the third harmonic of an ocean current-sensing radar near Atlantic City run by Rutgers University. The FCC directed the licensee to eliminate the harmonic but did not order the transmitter shut down. The transmitter manufacturer has since installed a low-pass filter to eliminate the interference. The "tick" showed up from 14.275 to 14.381 MHz.

The typical signal of the experimental Rutgers radar system is 25 kHz wide. While the tick was audible, it did not present significant interference to amateurs.

**PARK - ARES NET**  
Tuesday's  
9:00 PM  
146.97

## FCC SEEKS TO REQUIRE FCC REGISTRATION NUMBER

The FCC has proposed requiring that everyone it does business with obtain and use an FCC Registration Number--or FRN. Many amateurs registered with the Universal Licensing System already have been assigned a 10-digit FRN by the Commission Registration System--or CORES. The FCC has not made FRN use mandatory, however. The FCC released a Notice of Proposed Rulemaking (MD Docket 00-205) December 1.

The FCC says requiring individuals and entities to obtain an FRN will help it to better track and manage the collection of fees. The FCC proposes requiring that FRNs be provided with any filings that require payment of a fee, such as the vanity fee for amateurs.

The FCC is proposing to reject filings requiring an FRN that do not include the number. The Commission said its proposed rules "would make the use of the FRN mandatory in certain circumstances so that anyone not yet assigned an FRN or who has not yet obtained one must obtain one."

An individual does not have to hold an FCC license to obtain an FRN. The FCC says the information collected by CORES includes the "entity name and type," Taxpayer Identification Number or TIN--typically a Social Security Number for an individual, contact address and e-mail address. CORES information is not made public.

Comments on the FCC rulemaking notice are due 30 days from the date of publication in The

Federal Register. Reply comments are due by 45 days from the date of publication.

The FCC began implementing CORES earlier this year. CORES registration eventually will replace Universal Licensing System, or ULS, registration. The FRN will co-exist with the Licensee ID Number issued by the ULS, an FCC spokesperson said this week.

More information on CORES is available on the FCC Web site, <http://www.fcc.gov/> (click on the CORES registration link).

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## SAN FRANCISCO HAM LOSES ALL BUT HF CW PRIVILEGES FOR TWO YEARS

San Francisco amateur licensee Danny Kenwood, WA6CNQ, has again come in for FCC enforcement action. In an unusual enforcement twist, the FCC has modified Kenwood's General ticket to prohibit all amateur operation but HF Morse for a period of two years.

Kenwood lost his VHF and UHF privileges for 90 days in October 1999 following allegations of profanity, obscenity, and deliberate interference directed at users of the K7IJ Grizzly Peak repeater and of failure to properly identify. Last spring, the FCC issued a Warning Notice to Kenwood on the basis of reports from the K7IJ repeater system control operator that the repeater had to be shut down due to Kenwood's alleged "interference and harassment to other operators on the repeater system."

According to a December 5 letter to Kenwood from FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth, Kenwood volun-

tarily agreed to the HF CW-only modification, which begins November 30 and continues through November 2002. The prohibition extends to Kenwood's operation of any other amateur station as well as to operation of his own station by himself or anyone else.

Hollingsworth told Kenwood that if he violates FCC rules or the terms of the agreement, the FCC will initiate revocation and suspension proceedings against Kenwood and could also levy a fine.

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## FORMER CALIFORNIA HAM AGREES TO JAIL FOR UNLICENSED OPERATION

Former amateur Richard Allen Burton reportedly has agreed to serve three months in jail for Communications Act violations, pending pre-sentencing and medical reports. Burton, who has a long history of alleged unlicensed operation, was arrested August 5 after his indictment in May by a grand jury for the US District Court for the Central District of California. Sentencing will be in February.

Formerly WB6JAC, Burton faced six felony counts of violating the Communications Act of 1934. The FCC says he operated without a license on repeaters in Southern California after his license was canceled

Burton's General ticket was revoked in 1981. The following year, he was convicted on four counts of transmitting without a license and two counts of transmitting "obscene, indecent or profane words, language or meaning." Burton initially was sentenced to serve six months of an eight year prison term, with the remainder suspended. Upon appeal, the US Ninth District

Court of Appeals upheld the unlicensed operation conviction but threw out his obscenity conviction. The FCC says that Burton transmitted without a license while on probation in 1984 and again in 1990 and in 1992. After the second incident, he was fined \$2000 and received a year's probation; after the third, he was sentenced to seven months in jail and a year's probation.

In 1992, Burton attempted to get his Amateur Radio license back, but the FCC refused to reinstate him. He was briefly successful in getting a ham ticket in 1996, when he passed a Technician exam at a VE session. The FCC granted Burton a new license and the call sign KF6GKS, which was promptly set aside as soon as the Commission realized its error.

Burton has been free on \$20,000 bond. He pleaded not guilty at his arraignment. A trial was postponed while the plea agreement was being worked out.

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## NEW FCC SYSTEM MEANS QUICK LICENSE GRANTS

The FCC's new system to handle batch-filed amateur applications from Volunteer Examiner Coordinators has cut processing time from hours to minutes. The FCC inaugurated the more rapid amateur license application processing system December 28--slightly ahead of its original schedule.

"Way to go, FCC!" said an enthusiastic ARRL-VEC Manager Bart Jahnke, W9JJ, after his office fed its first batch of license applications into the system. Jahnke says five dozen ARRL-VEC applications resulted in license grants about 52 minutes later. The W4VEC in North Carolina and Central America

VEC also took advantage of the new system for the first time.

Except for a two-hour window right after midnight each day, the speedy new system looks for VEC submissions each hour on the half hour. With FCC license grant processing now measured in terms of hours instead of days, the major factor now determining the time from exam to license grant is how quickly VE teams get their test results to their VECs.

The FCC has been estimating a processing window of up to 90 minutes, depending on volume and arrival time. License grant results should be available immediately on the Universal Licensing System Web site, <http://www.fcc.gov/wtb/uls>, using the license search option.

Applications processed by the FCC one day will appear in the public update ("zip") files the following morning. Public call sign servers on the Internet should be able to update within 24 hours after FCC action--rather than the 48 hours that's been typical.

On-line filings from individuals, weekend filings and FCC-manually processed applications put into the hopper during weekdays at Gettysburg will continue to be handled as have been. These are batched for midnight processing, and weekend filings will not queue up until Monday midnight.

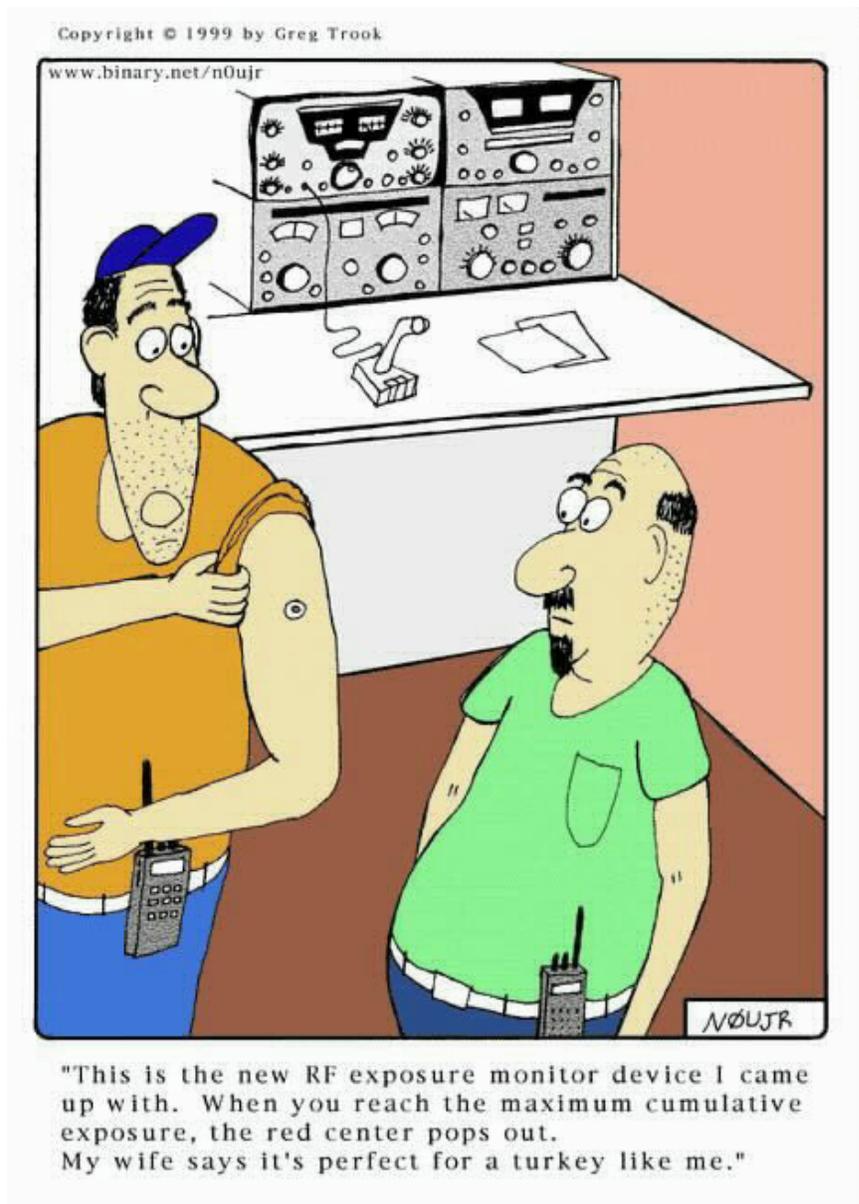
## ISS CREW NEWS

ISS Expedition 1 crew's tour extended: Space Station Alpha's first resident crew will get to stay in space a couple of weeks longer than planned because of a tight shuttle launch schedule. Expedition 1 crew commander William "Shep" Shepherd, KD5GSL, says he's OK with the extension, however. The launch of the new ISS crew on shuttle Discovery has been pushed back from February 15 to March 1. That's because Discovery was delayed in returning from space in October and because NASA needs to replace 10 thrusters. Shepherd and Russian cosmonauts Yuri Gidzenko and Sergei Krikalev, U5MIR, arrived at the station November 2. Replacing them in space will be Russian cosmonaut Yury Usachev and US astronauts James Voss and Susan Helms, KC7NHZ. Shepherd said he and his crew have more than enough food and water to make it through the additional two weeks. On its last mission in October, Discovery's landing was delayed two days because of bad weather and had to land at Edwards Air Force Base in California. Discovery didn't return to Kennedy Space Center until November 3, eating into the time it takes NASA to prepare the shuttle for another launch. During standard post-flight inspections, NASA workers found problems with some of Discovery's thrusters that require their replacement.



## OWLS?

Ham help solicited in owl searches: ARRL Amateur Radio Direction Finding Coordinator Joe Moell, K0OV, says hams in the Central US found an unusual form of ham radio public service this fall. Many have been listening intently just above 172 MHz for brief transmissions from radio tags on 52 endangered burrowing owls. The rare birds have left Saskatchewan and Alberta in Canada for warmer weather in the south, probably in southern Texas and northern Mexico. Burrowing owls were seen in Texas in late October, according to the latest report from Canadian biologists, but no leg bands have been spotted. Now that the fall migration is complete, hams in Texas and surrounding states are being asked to monitor for the tags this winter. Meanwhile, biologist Scott Weidensaul of the Ned Smith Center for Nature and Art in Pennsylvania wants hams from Maryland to South Carolina and points west to listen for tags now being put on northern saw-whet owls. For details of both owl-tracking efforts, visit Moell's Web site, <http://www.homingin.com/>. The site lists all of the tag frequencies as well as histories of the monitoring efforts and interesting information about these bird species, plus suggestions for equipment for monitoring and direction-finding on 172 MHz.



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