



RCA AMATEUR RADIO CLUB

INDIANAPOLIS, INDIANA



JUNE, 2015

MONTHLY NEWSLETTER

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE
TUESDAY, JUNE 9th, 6:30 PM AT [G.T. SOUTH'S](#),
5711 E. 71st STREET, INDIANAPOLIS, IN

[WE WILL HAVE ADVANCE \\$6 TICKETS FOR THE INDY HAMFEST AT THE JUNE MEETING.](#)

RCA ARC NEWS

SUMMARY OF THE MAY MEETING – Thanks to all who attended the May meeting. Dave Brown, W9CGI SK, was remembered for all of the activities he had participated in with our Club. Details for activities at the Dayton Hamvention were discussed including lunch Friday and Saturday plus dinner Friday evening. Jim, AF9A, reported the Yaesu Fusion repeater has not yet arrived [it has arrived as of May 19]. Jim, K9RU, gave a report on the ham radio activities surrounding the 500 Festival Mini Marathon. K9RU also spoke about K9LZJ's remote station which is being assembled in Greenfield and the differences in the various systems being used for remote control. Tom, K9XV, is planning the Field Day operation (June 27-28) for the combined RCA ARC, IRC, and Hoosier DX Club operation at Camp Belzer. This will be a 3A operation this year (last year was 2A) so we will need more operators. Mark your calendars! The Indy Hamfest is July 11. We will need help moving the junk on Friday before the Hamfest plus help manning the booth on Saturday. Dave, N9KZJ, reminded us of the "Ships" weekend, the first weekend in June.

NEXT TEST AMATEUR RADIO LICENSE TEST SESSION – The next scheduled RCA/IRC test session:

Time: Saturday, June 13th, 12:00 PM (Walk-ins allowed)
Location: Salvation Army EDS Training Facility
4020 Georgetown Rd., Indianapolis, IN
Contact: [James K. Rinehart, \(317\) 495-1933, Email: k9ru@arrl.net](#)

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Jun 6-7 Museum Ships On the Air
Jun 13-15 ARRL June VHF Contest- <http://www.arrl.org/june-vhf>
Jun 27-28 Field Day. Camp Belzer – Joint effort with Indianapolis Radio Club
July 11 Indy Hamfest, Marion Co. Fairgrounds, <http://indyhamfest.com>

DAYTON HAMVENTION 2015: GREAT WEEKEND, FRIENDLY CROWD

Another Dayton [Hamvention](#)® is in the log, and the sponsoring Dayton Amateur Radio Association (DARA) already has begun counting down to the 2016 event (May 20-22, 2016).

The RCA Amateur Radio Club

Friday, at noon, the RCA ARC had the traditional get together in the permanent seating in

the northwest corner of the arena. We had a good turnout with many of the regulars and a great chance to catch up with everyone. Bob Vandender, was setup in his normal flea market spot and it provided a nice rest stop. Friday evening after the Hamfest we had dinner at the The Barnsider Restaurant just east of the Hamvention on route 48, with 14 attending.

The Hamvention

While Hamvention traditionally provides an ideal occasion for Amateur Radio manufacturers to introduce their latest offerings, new gear was in somewhat shorter-than-usual supply at the 2015 event. On the other hand, this may have shifted attention toward Hamvention's other activities, such as the always-popular forums and, of course, the flea market. There were scattered showers on all 3 days.

"Great weekend!" was how ARRL CEO David Sumner, K1ZZ, summed things up. He described visitors as "friendly" and said there was a lot of anticipation for the geosynchronous satellite package that AMSAT plans to put into orbit in 2017.

ARRL Publications Manager and QST Editor Steve Ford, WB8IMY, described Hamvention's opening day as "extremely crowded for a Friday." Traffic at ARRL EXPO was brisk, and the ARRL Lab's spectral purity testing table saw "steady traffic with long lines at times," he added. NASA Astronaut Mike Fincke, KE5AIT, a special Hamvention guest, stopped by to tour ARRL EXPO and to chat with ARRL President Kay Craigie, N3KN, and visitors.

On Saturday afternoon Dayton Amateur Radio Association ([DARA](#)) President Don Dubon, N6JRL, presented two \$10,000 checks to ARRL President Craigie. One was a gift to support the ARRL [Teachers Institute on Wireless Technology](#). DARA has sponsored past Teachers Institute sessions in Dayton, and a class will be held there this summer as well, July 13-16. The second check was a donation to the [ARRL Foundation Scholarship Fund](#).

What's New?

New products touted at the 2015 Hamvention included the K3S transceiver from [Elecraft](#) -- an upgrade of its very popular K3. Expected to ship by mid-June, the K3S is the "second-generation, software defined superhet transceiver," the manufacturer said on its website. "We've upgraded nearly every subsystem, improving performance and adding many new features," Elecraft said.

New features include a quieter synthesizer, "unequaled" strong-signal performance, and "exceptional" transmitter purity. There's also a second preamp, a new LCD bezel, and a "soft-touch VFO A knob with improved grip."

FlexRadio debuted the [Maestro](#) control console for its FLEX-6000 series of transceivers. Expected to become available later this year, the Maestro is "an intuitive, plug-and-play control console" that lets the user operate any FLEX-6000 transceiver without a PC. FlexRadio said the unit combines a high-definition 8-inch touch display and is "ergonomically designed."

European manufacturer Elad introduced at Hamvention its SDR [FDM-DUO](#) transceiver, which has been available since 2014. The manufacturer said on its website that the FDM-DUO can be operated in a traditional manner or via a PC. Its direct-conversion receiver covers 10 kHz to 54 MHz. The transmitter runs about 5-8 W.

Other new products at Dayton this year included several accessories for Elecraft radios from [QRP Works](#); the [Rowetel](#) SM1000 digital voice unit, and the MFJ-226 graphical antenna analyzer and compact MFJ-939I 200 W autotuner from [MFJ](#).

Forum News

On Saturday, Carole Perry, WB2MGP, moderated the Youth Forum, which featured presentations from eight talented young radio amateurs, each of whom -- along with eight additional young hams selected during a prize drawing -- enjoyed an ARRL-hosted luncheon with Astronaut Mike Fincke. "These 16 young hams are already contributing to the second century of our Amateur Radio Service!" said ARRL Education Services Manager Debra Johnson, K1DMJ.

At its forum, [AMSAT](#) announced that the launch of its [Fox-1](#) CubeSat has been delayed until late September. AMSAT Vice President-Engineering Jerry Buxton, N0JY, also said that AMSAT's planned geosynchronous satellite package would offer uplinks on 5 GHz and downlinks on 10 GHz. Buxton explained that the geosynchronous footprint will not be absolutely fixed; some variation may require some up/down movement of the user's dish at certain times. Even in the worst case, he told the AMSAT Forum, a user with a fixed antenna would still be able to enjoy several hours of access each day. The transponder for the new satellite will be software defined and capable of supporting many different modes, including analog SSB. The satellite's potential footprint could extend over the US from the Mid-Pacific to Africa.

AMSAT has accepted the opportunity to be a "hosted payload" on a spacecraft that Millennium Space Systems ([MSS](#)) of California is under contract to design, launch, and operate for the US government.

At the Saturday ARRL Member Forum moderated by ARRL Great Lakes Division Director Dale Williams, WA8EFK, President Craigie discussed "The Amateur Radio Parity Act of 2015 -- [H.R. 1301](#) -- and encouraged members to recruit supporters among their congressional representatives. ARRL Regulatory Information Manager Dan Henderson, .

ARRL Chief Technology Officer Brennan Price, N4QX, talked about ARRL and Amateur Radio's interests at the upcoming World Radiocommunication Conference 2015 (WRC-15), which he will attend in November. High on the list was the possibility of a contiguous 5 MHz secondary allocation somewhere within the range 5250 kHz through 5450 kHz. He also discussed the issue of vehicular radars in the 76-81 GHz range, the topic of a current FCC proceeding.

Sumner shared news of recent FCC progress toward domestic implementation of the new Amateur Radio MF and LF allocations at 135.7-137.8 kHz and 472-479 kHz and upgrading of the amateur allocation at 1900-2000 kHz from secondary to primary. ARRL First Vice President Rick Roderick, K5UR, gave a rousing presentation encouraging ARRL membership renewal. He also spoke of the need to revitalize clubs.

Honors

Named as Hamvention Amateur of the Year was top-tier contester Tim Duffy, K3LR, who is also ARRL Western Pennsylvania Section Manager. Hamvention's Special Achievement Award went to Tom Medlin, W5KUB, and the Technical Excellence Award to the Rev George Dobbs, G3RJV. The Orlando Amateur Radio Club (OARC) was Club of the Year.

ARRL has [posted](#) an album of Dayton Hamvention 2015 photos on its Facebook page.
--ARRL Letter

FCC ELIMINATING VANITY CALL SIGN FEE

The FCC is dropping the regulatory fee to apply for an Amateur Radio vanity call sign. The change will not go into effect, however, until required congressional notice has been given. This will take at least 90 days. As the Commission explained in a *Notice of Proposed Rulemaking, Report and Order, and Order* ([MD Docket 14-92](#) and others), released May 21, it's a matter of simple economics.

"The Commission spends more resources on processing the regulatory fees and issuing refunds than the amount of the regulatory fee payment," the FCC said. "As our costs now exceed the regulatory fee, we are eliminating this regulatory fee category." The current vanity call sign regulatory fee is \$21.40, the highest in several years. The FCC reported there were 11,500 "payment units" in FY 2014 and estimated that it would collect nearly \$246,100.

In its 2014 *Notice of Proposed Rule Making (NPRM)* regarding the assessment and collection of regulatory fees for FY 2014, the FCC had sought comment on eliminating several smaller regulatory fee categories, such as those for vanity call signs and GMRS. It concluded in the subsequent *Report and Order* ([R&O](#)) last summer, however, that it did not have "adequate support to determine whether the cost of recovery and burden on

small entities outweighed the collected revenue or whether eliminating the fee would adversely affect the licensing process."

The FCC said it has since had an opportunity to obtain and analyze support concerning the collection of the regulatory fees for Amateur Vanity and GMRS, which the FCC said comprise, on average, more than 20,000 licenses that are newly obtained or renewed, every 10 and 5 years, respectively.

"The Commission often receives multiple applications for the same vanity call sign, but only one applicant can be issued that call sign," the FCC explained. "In such cases, the Commission issues refunds for all the remaining applicants. In addition to staff and computer time to process payments and issue refunds, there is an additional expense to issue checks for the applicants who cannot be refunded electronically."

The Commission said that after it provides the required congressional notification, Amateur Radio vanity program applicants "will no longer be financially burdened with such payments, and the Commission will no longer incur these administrative costs that exceed the fee payments. The revenue that the Commission would otherwise collect from these regulatory fee categories will be proportionally assessed on other wireless fee categories."

The FCC said it would not issue refunds to licensees who paid the regulatory fee prior to its elimination. --ARRL Letter

AMATEUR RADIO VOLUNTEERS MUSTER FOR "UNPRECEDENTED" WEATHER EVENT

When extremely heavy rainfall hit Texas and Oklahoma over the Memorial Day holiday weekend, Amateur Radio Emergency Service (ARES) and SKYWARN volunteers scrambled to assist local emergency operations centers and National Weather Service (NWS) offices. Severe weather continued into the week following Memorial Day.

"This has probably been the most significant weather event to hit Texas," ARRL South Texas Section Manager Lee Cooper, W5LHC, said. "We have had major tropical storms and hurricane events, but the widespread combination of heavy rains, tornadoes, and flooding all at same time and covering two-thirds of the state is pretty much unprecedented for us."

Oklahoma Section Emergency Coordinator Mark Conklin, N7XYO, said communication systems in his state have, for the most part, remained unaffected by the flooding. "[There have been] no deployments or activations by any ARES-OK groups," Conklin told ARRL. "All of the American Red Cross shelters are able to communicate via cell phone or normal land lines."

Conklin said that ARES members in Leflore, Cherokee, Okmulgee, Tulsa, and several other Oklahoma counties have been busy on SKYWARN nets. "Members that also support local emergency management agencies have been busy passing information about storm damage and area flooding," he added.

The fierce, torrential rainstorms were in stark contrast to the severe drought the region had experienced in recent years. The floods they generated over the weekend struck with what Texas Gov Greg Abbott called "tsunami-type power." The extreme flooding stranded hundreds and has resulted in several deaths. Abbott has declared a state of emergency in Texas and designated some three dozen counties as disaster areas.

The NWS-Houston Office posted a rare "flash flood emergency" warning, as the rainfall inundated highways, washing away or stranding countless vehicles. On May 24, the NWS confirmed that an EF1 tornado had touched down briefly in southwest Houston. At the peak of the rainfall on May 25, Houston was reported to have received nearly 1 foot of rain in less than 24 hours, comparable to the rainfall that might accompany a tropical storm or hurricane.

Earlier in the holiday weekend, nearly the entire state of Texas was under a flash flood watch on May 23. In Wimberly, Texas, a woman called her sister to report that her family's house was "floating down the river." The home's occupants are listed as missing.

According to media accounts, water levels in Wimberly rose nearly 40 feet in a matter of hours. Read [more](#). --ARRL Letter

CHINA SET TO LAUNCH SEVERAL AMATEUR RADIO SATELLITES THIS SUMMER

CAMSAT has announced that the CAS-3 amateur satellite system is nearing completion, and six Chinese amateur satellites will be launched in mid-July.

"All six satellites are equipped with substantially the same Amateur Radio payloads, a U/V mode linear transponder, a CW telemetry beacon, and an AX.25 19.2k/9.6k baud GMSK telemetry downlink," the CAMSAT announcement said. CAMSAT said that each Amateur Radio complement has the same technical characteristics, but will operate on different 70 centimeter uplink and 2 meter downlink frequencies.

CAMSAT said it has worked closely with DFH Satellite Co Ltd, a Chinese government aerospace contractor, to complete the project. "All the satellites are currently conducting final testing and inspection," CAMSAT added. Four of the satellites are described as "microsatellites," while three are listed as CubeSats.

CAMSAT said a Long March-6 rocket will carry the satellites into orbit. The launch will take place at Taiyuan Satellite Launch Center. CAS-3A will have sun-synchronous orbits of about 450 km, while the other satellites have sun-synchronous orbits of about 530 km.

"The launch will carry total of 20 satellites," CAMSAT said. "Three other satellites named as CAS-3G, CAS-3H, and CAS-3I, involved in Amateur Radio from other agencies of China, will share the same launch."

CAMSAT said it was assisting the Chinese government with frequency allocation and coordination and would announce additional details.

Meanwhile, AMSAT News Service has reported [via Mineo Wakita](#), JE9PEL, that Beijing will be launching other satellites carrying Amateur Radio payloads in July. According to AMSAT-UK, the CAS-2A1 and CAS-2A2 satellites will be combined into a binary star system for Amateur Radio communication and education. "There will be a radio link between the two satellites when the satellites are in suitable positions in their orbits, so that Amateur Radio communication coverage can be extended," AMSAT-UK reported on its website. Read [more](#). -- *Thanks to CAMSAT, AMSAT News Service, Mineo Wakita, JE9PEL, and AMSAT-UK*

USNA APRS/PSK31 CUBESATS UP AND RUNNING

The APRS/PSK31-equipped US Naval Academy satellites appear to be operating, with one exception, following their May 20 launch. Included in the launch was a pair of 1.5U CubeSats -- the PSAT APRS/PSK31 satellite and BRICsat, a propulsion/PSK31 satellite -- as well as a 3U CubeSat, USS Langley (Unix Space Server Langley), and [The Planetary Society's](#) LightSail-1.

PSAT, a USNA student project named in honor of USNA alum Bradford Parkinson, of GPS fame, contains an APRS transponder for relaying remote telemetry, sensor, and user data from remote users and Amateur Radio environmental experiments or other data sources back to Amateur Radio experimenters via a global network of Internet-linked ground stations.

[Brno University](#) transponders on PSAT and BRICsat support multi-user PSK31 text messaging (28.120 MHz uplink/435.350 MHz FM downlink). The BRICsat and PSAT PSK31 transponders operate on the same frequency, although one has PSK telemetry on 315 Hz, the other on 375 Hz.

Bob Bruninga, WB4APR, said the PSAT telemetry on 145.825 MHz (1200 baud AX.25) is working okay, and the [APRS downlink page](#) has been capturing PSAT telemetry.

Bruninga said BRICSat's telemetry has been heard, but has been cycling off, due to low power. He said the BRICSat PSK31 downlink has been copied too, but only barely. "BRICSat seems to have some kind of problem," he told ARRL. The USS Langley spacecraft has not been heard yet, he said.

The LightSail-1 packet 9600 baud (FSK) AX.25 downlink is on 437.435 MHz. The Planetary Society's [Jason Davis](#) is asking radio amateurs to [e-mail](#) him any data they collect from LightSail, including any screenshots.

Bruninga has invited APRS radio amateurs to tune into the packet downlinks and to upload IGate packets into the global APRS-IS system and also to try out the "exciting, new full-duplex PSK31 way of multi-user communication." He notes that the UHF downlink signal is only 300 mW, and a beam antenna would be required to hear the signal. Bruninga advised that those transmitting to the satellites use nothing more than a dipole or quarter-wave vertical, and no more than 25 W output power. Read [more](#). --ARRL Letter

US NAVY-MARINE CORPS MARS PROGRAM TO END

The US Department of Defense is phasing out the [US Navy-Marine Corps Military Auxiliary Radio System](#) (MARS) program. Its operational mission will transition to the other MARS service branches by the end of September. MARS volunteers are Amateur Radio operators who provide auxiliary or emergency communications to local, national, and international emergency and safety organizations, as an adjunct to normal communications.

"The intent of the transition is to best align the program to support national mission requirements," the announcement said. Chris Jensen of Naval Computer and Telecommunications Area Master Station Atlantic (NCTAMS LANT) told ARRL that the Navy no longer has any service-specific requirements for Navy-Marine Corps MARS and is working within DoD to transition the program into Army and Air Force MARS by September 30.

The announcement encouraged current Navy-Marine Corps MARS members and clubs to submit applications to the US Army MARS or US Air Force MARS programs as soon as possible.

"The US Navy greatly appreciates the thousands of MARS volunteers, past and present, who have been integral to the success of MARS," the announcement concluded.

An individual very familiar with the MARS program said the change was not unexpected and came to a head as the US Strategic Command embraced Army MARS as the lead branch for contingency communication and Air Force MARS began partnering with the US Army program on the operations side.

"The Army and Air Force MARS branches have an obvious role in providing contingency communications for the 50 states," said the individual, who preferred not to be identified by name. "Members are everywhere 'on the ground,' and experience in Afghanistan and Iraq has proven the tactical usefulness of HF on land. There was no similar role for the landlocked membership of Navy-Marine Corps MARS."

He said the MARS program can use all the volunteers it can attract. Read [more](#).

SHORTS

ARRL VHF/UHF Contests Now Allow Self-Spotting: Beginning with the [ARRL June VHF Contest](#), June 13-15, participants will be allowed to spot themselves on spotting networks. These changes were made to encourage greater participation and band utilization. For more information on these rule changes, see [General Rules for ARRL Contests Above 50 MHz](#) (specifically, item 1.16). Self-spotting announcements "shall be limited to call sign, location, band or frequency, mode, and -- if applicable -- transmitting sequence and listening direction to coordinate antenna peaking prior to initiation of the contact and to explain contest rules, such as the exchange required." --ARRL Letter

RADIO AMATEUR SWORN IN AS NEW NASA DEPUTY ADMINISTRATOR – Massachusetts Institute of Technology (MIT) professor Dava Newman, KB1HIK, has been sworn in as the deputy administrator of NASA. President Barack Obama appointed Newman last October, and the US Senate confirmed her appointment on April 27. The swearing-in took place on May 15 in her MIT office in Cambridge. Newman is Apollo Professor of Astronautics and Engineering Systems and the director of the Technology and Policy Program at MIT. She started her official duties as NASA's new deputy administrator on May 18 at the agency's headquarters in Washington, DC.

Newman had been on the MIT faculty since 1993. Her research has included modeling human performance in low and microgravity conditions, examining the dynamics and control of astronaut motion, and the development of assisted walking devices for the physically handicapped. Possibly her most prominent project has been the development of the BioSuit, a skintight spacesuit that would give astronauts unprecedented comfort and freedom in exploration of planetary surfaces and extra-vehicular activity.

An avid sailor, Newman has circumnavigated the globe. -- *Thanks to MIT and to NASA*

FRIEDRICHSHAFEN'S "HAM RADIO" MARKS 40 YEARS IN JUNE WITH SPACE THEME – "[Ham Radio](#)," Europe's largest Amateur Radio event, celebrates its 40th anniversary this year. The annual gathering, known to most simply by its location -- Friedrichshafen -- takes place June 26-28 on the shore of Lake Constance in southwest Germany. The exhibition in 2014 attracted more than 17,000 visitors, including contingents from the ARRL and the International Amateur Radio Union (IARU). The Deutscher Amateur Radio Club (DARC) is a Ham Radio cosponsor, and its theme for this year's gathering is "Space stations, satellites, reflections: Amateur Radio contact with space." The DARC celebrates its 65th anniversary this year.

To commemorate the 40th anniversary of Ham Radio, the venue, Messe Friedrichshafen, will present a retrospective featuring photographs, exhibit items, and recollections from the event's past 4 decades. [Contact](#) Messe Friedrichshafen to submit items or for more information. --ARRL Letter

VERSION 6.0 OF EZNEC HAS BEEN RELEASED BY W7EL. W7EL was on hand at Dayton to explain some of the new capabilities, including faster calculations, graphical wire modification, split wires, enhanced scaling, correction for loaded and trapped Yagis. Capacities have been increased - version 6.0 can handle 2000 segments, automatic catenary generation for wire antennas, and can output Touchstone files. – ARRL Contest Newsletter

USING INEXPENSIVE WI-FI ROUTERS WITH GARGOYLE FIRMWARE to address multi-station networking scenarios typically occurring on DXpeditions was suggested by NX1P in a presentation at the International DX Convention in Visalia, California. Some of the problems solved are the same as those one would encounter networking contest stations in a temporary multi-op or field-day situation. <http://www.nx1p.net/files/20150327VisaliaNX1PYear2-1.pptx>

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