



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

>>>>>>> <http://www.barconline.org> <<<<<<<<

March 2014

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PRESIDENT'S MESSAGE

Now that winter is almost over and before we get involved with all those spring and summer projects around the house and yard, this is a good time to review what you have for being prepared for an emergency.

Being prepared for disaster is important. When disaster strikes, you may not have ample time to respond and ensure the resources you and your family need to survive are available. Moreover, hundreds of other families in your area share the same concerns, and it will be difficult to get access to the necessities you need due to shortages and competition. Do not wait until the last minute and get caught in this situation. Disaster-time civilian response requires sound decision-making and action to save the lives of families and friends.

When determining your emergency needs, plan for the long haul. In any major disaster scenario, it may take 72 hours or more for emergency personnel to reach you. Emergency preparedness kits should contain the essentials your family needs to survive during a disaster. Having two is ideal; a multi-purpose kit with provisions for more activities for the home, and a transportable slimmed down kit with bare necessities for survival when on the go. Any preparations should be accompanied by an emergency plan. Know where your family is and how to keep in contact in the event of a disaster. Most of all keep informed. Find out what disasters you may be affected by and plan accordingly. Determine and manage your emergency needs as required.

When preparing a disaster preparedness kit, first plan for the essentials for survival. Think practical first, and think comfortable second. All essential needs should be able to fit in a 5 gallon bucket. Absolute necessities include food, water, and warmth. Foodstuffs should be high energy non-perishables and kept in sealed airtight containers. Made-ready meals and canned goods are excellent choices for emergency food sources. It is safe to ration, the body can be maintained on half of your average caloric intake during an emergency. Provisions should include enough food supplies to last seven days for each family member.

[Be Ready Utah](#) has lots of information on what is needed to be prepared where ever you are, at home, at work, or at school.

Your family may not be together when disaster strikes, so it is important to plan in advance: how you will contact one another; how you will get back together; and what you will do in different situations.

It may be easier to make a long-distance phone call than to call across town, so an out-of-town contact may be in a better position to communicate among separated family members. Be sure every member of your family knows the phone number and has coins or a prepaid phone card to call the emergency contact. You may have trouble getting through, or the telephone system may be down altogether, but be patient.

You may also want to inquire about emergency plans at places where your family spends time: work, daycare and school. If no plans exist, consider volunteering to help create one. Talk to your neighbors about how you can work together in the event of an emergency. You will be better prepared to safely reunite your family and other during an emergency if you think ahead and communicate with others in advance.

Next month I'll talk about what is needed for an amateur radio emergency kit.

73,
Cordell
KE7IK



UPCOMING 2014 ACTIVITIES

- 8 March, 10:00 AM — BARC Club Meeting
- 12 March, 7:30 PM - ARRL Rocky Mountain Division Net IRLP Node: 9871
- 15 March 8:00 AM — RACES HF Net 3920 KHz
- 5 April — Longmont ARC LARCFest (Longmont, CO) [More Info](#)
- 9 April, 7:30 PM — ARRL Rocky Mountain Division Net IRLP Node: 9871
- 12 April, 10:00 AM — BARC Club Meeting
- 17 April, 8:00 PM - RACES VHF Net 147.18 Snowbird 147.20 IRLP 146.72 Mt. Logan
- 10 May, 10:00 AM — BARC Club Meeting
- 14 May, 7:30 PM - ARRL Rocky Mountain Division Net IRLP Node: 9871
- 17 May, 8:00 AM — RACES HF Net 3920 KHz
- 19-20 May — Mountain Man Rendezvous
- 5 June, 7:00 PM — VE Test Session at the USU ASTE Bldg RM 108
- 7 June — Little Red Riding Hood
- 14 June — Tour De Cure (Box Elder Co.)

Local Radio Nets:

The **Weekly BARC net** is for BARC members and anyone else that would like to check in, held **every Tuesday night at 9:00 p.m.** local time on the Mt Logan BARC Repeater and Linked Systems (146.720)

The **BARC Ladies Net** is every **2nd and 4th Tuesday at 8:00 p.m.** on the BARC Repeater and Linked Systems (146.720). All licensed lady amateur radio operators are welcome to check in.

BARC Club Meetings are normally on the 2nd Saturday of the month at 10:00 A.M. on the 3rd floor of the Cache County Sheriffs Complex on 200 North and 1225 West, Logan, Utah.

ARES Meetings are usually held on the Third Wednesday of each month at 7 P.M. at the Cache County Sheriffs Complex. Contact Tyler Griffiths for more information.

2014 Proposed BARC Budget

General	\$250
Refreshments	\$350
Field Day	\$400
Swap Meet	\$50
Christmas Party	\$150
Promontory Site Rental	\$600
Rocket Recovery	\$250
Pay Pal Fees	\$50
Total Budget	\$2100
Projected Income/Sources	
Dues	\$1800
Equipment and other donations	\$3000

The Vote for the 2014 budget includes the following.

1. Approve the proposed general budget.
2. Authorize the BARC Board the discretion to allocate additional funds for equipment and activities as needed to meet the needs, repair, or for additional expenses deemed appropriate.

VOTE:

_____ YES

_____ NO

The ARRL Letter for February 6, 2014

ARRL Centennial: A Century of Amateur Radio and the ARRL

The "European War" began on July 28, 1914, and the United States entered the renamed "World War" on April 5, 1917. The three American military services -- the Navy, the Army, and the Army Air Service -- quickly realized how ill prepared they were in the area of communication, having neither enough operators nor enough equipment to wage a modern war.

The Navy soon called on President H. P. Maxim and the ARRL for help. At that time, the ARRL boasted some 6000 hams, who were experienced radio builders, repairmen, and highly trained operators -- some with as many as 15 years of experience. The Navy asked Maxim to help it find 500 operators immediately, which was accomplished! Later, the Navy issued a second call, this time for 2000 more volunteer radio operators; again, that requirement was quickly met. Another 1000 hams went into Navy service later in the war. The Army and the Army Air Service raised comparable numbers of operators from among the ranks of American radio amateurs.

When these hams provided their services to the military, their station equipment often went with them. The military branches were as equipment poor as they were operator poor.

The amateurs who went into the various branches of the military did fine work. The quality of American communication links often made a great difference in the outcome of battles. The performance of American hams garnered accolades from many people, including Commendatore Guglielmo Marconi, the chief signaling officer of the Italian Army.

Soon after the war ended on November 11, 1918, the US Secretary of Commerce said, "The officers in charge of the wireless operations of our armies in France commend highly the skill, ingenuity and versatility of the licensed amateur radio operators who volunteered in large numbers for military service and served in dangerous and responsible positions."

However, things quickly took a turn for the worse for the amateur radio community. We'll look at that unexpected and dangerous development next week. -- *Al Brogdon, W1AB*

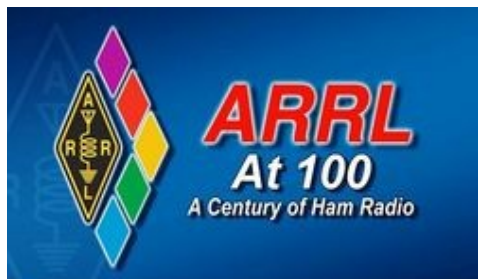


The ARRL Letter for February 13, 2014

ARRL Centennial: A Century of Amateur Radio and the ARRL

American hams won high praise for their considerable help to the military during the Great War. However, at the end of the war, hearings in Congress began on an effort to put all radio matters under the control of the US Navy. It was expected that the Navy would abolish Amateur Radio -- despite the debt owed to hams for their war service.

ARRL President Maxim and representatives of many of the large radio clubs in the country attended the hearings and spoke against the proposed legislation. The ARRL called on its membership and on families of hams killed in action to speak out in opposition to the bill, which they did -- in large numbers, and with emotional pleas. So, despite a strong effort to push the bill through, it died in committee and never reached the floor.



On April 12, 1919, five months after the armistice was signed, the US Navy Department announced that the ban on amateur *receiving* would be lifted, but that the ban on transmitting would continue until the President of the United States officially announced that a state of peace existed.

Three months later, on July 24, the Navy tried again. The Secretary of the Navy wrote the President of the Senate, asking that legislation be enacted to give the Navy a monopoly on all oceanic and international radio communication. This effort was also defeated by the combined

forces of American radio interests, including the efforts of the ARRL.

In August, the Navy *again* postponed the removal of the ban on transmitting by hams. A bill was introduced in Congress to force the Navy to lift the ban. Finally, under the threat of congressional action, the Navy, on September 26, 1919, lifted the transmitting ban and ceded authority over radio matters to the Department of Commerce. Amateur Radio was back in business!

In this year-long overview of the first 100 years of the ARRL, I've lingered over the early years simply because of their great importance. Without the early efforts of the League, its officers, and its members, we likely would not have Amateur Radio as it is today. Perhaps there would be no Amateur Radio at all.

Now we'll move on through our retrospective at a faster pace. Hams get on the air again! Technology makes great strides! The ARRL continues its leadership roll. Stay tuned! -- *Al Brogdon, W1AB*

The ARES E-Letter for February 19, 2014

Letters: FEMA Adds Disaster Reporter Feature to App

FEMA has added a feature to their disaster app whereby citizens can send photos of disaster scenes to FEMA from their smartphone. After a quick vetting, the photo is geo-referenced (added as a GIS layer) to an interactive map for emergency managers. Here is the link to the story: <http://howtomobile.apps.gov/2014/01/16/fema-app-adds-disaster-reporter-feature/>

-- *Robert Bauer, KC4HM, Louisville, Kentucky* [Bauer is a retired city of Louisville police officer and trained severe storm spotter for the NWS Office in Louisville - ed.]

Letters: New Mesh Software Available

The leaders at Broadband-Hamnet (formerly known as HSMM-MESH) have officially released a version of their MESH software for some of the [Ubiquiti](http://www.broadband-hamnet.org/documentation/186-ubnt-fw-release-101) products. See <http://www.broadband-hamnet.org/documentation/186-ubnt-fw-release-101>

Unlike the Linksys WRT54G series of indoor, table top routers/radios, the Ubiquiti devices are designed for outdoor use. In addition, at least two Broadband Hamnet capable Ubiquiti devices, the *NanoStation Loco M2 (NSL-M2)* and the *NanoStation M2 (NS-M2)*, incorporate a router radio and an antenna in one unit. The main difference between the *NanoStation Loco M2* and the *NanoStation M2* is the strength of their built in antennas. The *Loco M2* provides 8 db gain while the *M2* offers an increase to 11 db gain.

If I were to update my old Volusia Mesh presentation (as discussed in the [January issue](#) of this newsletter), I'd replace the WRT54G routers with the Ubiquiti M2. You can buy the M2 new from Amazon.com for \$88.99, just about the price of an old WRT54G, an antenna, and a waterproof box. -- *Mark Friedlander, KV4I, Assistant EC, Volusia County, Florida ARES*

The ARRL Letter for February 20, 2014

Clubs: ARRL Atlantic Division Adds Resources to Aid Amateur Radio Clubs

The ARRL Atlantic Division leadership has created additional resources to assist clubs in such areas as growing and maintaining membership, club management, club newsletters, and meeting presentations. ARRL Atlantic Division Director Bill Edgar, N3LLR, said he'd heard from clubs in his division who were seeking resources aside from "the excellent club resources" the ARRL already offers.



"To that end, we have created a number of Amateur Radio discussion forums and file libraries to help clubs with that process," Edgar said.

These forums are in the "Amateur Radio Forums" section of the [BFDIN Forums](#) site. Current Amateur Radio discussion forums include:

◆ **Amateur Radio Emergency Communications** -- Topics of interest to Amateur Radio Emergency Service (ARES®) members and to other emergency communication/public service groups.

◆ **Amateur Radio Presentations** -- A forum where participants may upload programs on Amateur Radio-related topics to share with other clubs, who can download and use these presentations for their own meeting programs.

◆ **Club Management** -- Discussion of club management issues, such as meeting topics, elections, recruiting, classes, etc.

◆ **Club Newsletters** -- Discussion and sharing of club newsletter articles.

ARRL Atlantic Division Director
Bill Edgar, N3LLR.

◆ **Digital Modes** -- Discussion of digital-mode topics and the sharing of macros and software.

◆ **Hamfest Management** -- Discussion of hamfest management topics.

◆ **NTS** -- Discussion of message handling and the National Traffic System (NTS).

On each forum are individuals knowledgeable in the forum topic who will help to moderate the discussion. Moderators also will assist in keeping the conversation flowing and on topic.

These forums are open at no cost to *all* Amateur Radio operators -- regardless of ARRL Division -- who are club officers, club members, or interested in starting an Amateur Radio club. The BFDIN Forums site also includes an "Amateur Radio General Discussion" forum that is open to prospective radio amateurs.

Participants will be asked to create a user account by registering your first initial + last name or your call sign as your login. Once users create an account, they will be asked by e-mail to confirm their e-mail account and account setup.

Radio History: A Century of Amateur Radio and the ARRL

Following the resumption of Amateur Radio activities after World War I ensued a thundering herd of advances in the state of the Amateur Radio art. Here are some highlights from that period.

April 1922 -- The first contact was made between California and Hawaii. **September 1922** -- 1CCZ worked every US call district in one night, the first time that had ever been accomplished. **November 1922** -- Another record-breaking relay was accomplished, from 1AW to 9AWM to Hawaiian 6ZAC and back to 1AW in 4 minutes 18 seconds.

June 1923 -- The first expedition using Amateur Radio sailed. The schooner *Bowdoin* (WNP) had Don Mix, 1TS, aboard as its operator. This and later *Bowdoin* expeditions were searching for the land mass that was thought to exist at the North Pole. **September 1923** -- VK2CM contacted ZL4AA (a 1500 mile path), with VK2CM running 4 *milliwatts* on CW! **November 1923** -- 1MO and 1XAM worked F8AB, the first transatlantic contact. **December 1923** -- 1EH made contacts with England, Italy, and Holland.

May 1924 -- The first contact was made between New Zealand and Argentina, a new DX record of 6400 miles. The same month saw the first contact between North and South America. **July 1924** -- All previous shortwave work had required "experimental" licenses. After considerable groundwork by the ARRL, the government allowed shortwave work by all amateurs, with band assignments of 1.5 to 2.0, 3.5 to 4.0, 7.0 to 8.0, 14.0 to 16.0, and 56.0 to 64.0 MHz. **September 1924** -- The first confirmed contact was made between California and New Zealand. **December 1924** -- The first *daylight* transcontinental signals were heard, from Connecticut to California, as John Reinartz, 1QP, made experimental transmissions on the new 20 meter band.



April 1925 -- The first published article on the theory of shortwave propagation appeared in *QST*, authored by John Reinartz, 1QP. Also in April, the International Amateur Radio Union was formed at a conference in Paris, and Hiram Percy Maxim was elected as its first president. **May 1925** -- The first contact was made between Australia and England, during daylight hours on 20 meters.

April 1926 -- The Worked All Continents award was first offered; it garnered eight initial members.

May 1927 -- The first annual ARRL DX Contest was held.

March 1928 -- The 10 meter band was opened to Amateur Radio use.

These were just a few highlights from that wonderful era of advancement of the radio art by amateurs. Next week: On to the 1930s. -- *Al Brogdon, W1AB*

In Brief

◆ **ARRL/TAPR Digital Communications Conference Dates Set** The 33rd annual ARRL/TAPR Digital Communications Conference (DCC) will take place in Austin, Texas, September 5-7, at the Marriott South Hotel. More information will be posted to the TAPR [DCC web page](#). The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs to meet, publish their work, and present new ideas and techniques. -- *Thanks to Steve Bible, N7HPR, President, TAPR Conference Manager*



◆ **CAPE-2 CubeSat Designated as OSCAR-75** The University of Louisiana [CAPE-2](#) (Cajun Advanced Picosatellite Experiment) CubeSat has been designated OSCAR-75 or LO-75, AMSAT OSCAR Number Administrator Bill Tynan, W3XO, has announced. CAPE-2 operates on 145.825 MHz, with a CW beacon that identifies with the call sign W5UL. It also includes a digipeater, text-to-speech module, a simplex repeater, and e-mail and tweet functions. Ground station software is [available](#). [FUNcube](#) was recently designated OSCAR-73 or AO-73, while [CubeBug-2](#) (aka "Manolito") has been designated as LO-74 (see [PE0SAT](#)). -- *AMSAT News Service and Bill Tynan, W3XO*

◆ **Kenwood Buys E.F. Johnson:** JVC Kenwood has [purchased](#) E.F. Johnson Technologies. Johnson has been manufacturing radio gear for a long time and was a major player in the 1950s and 1960s. Today, it's not unusual to see hamfest vintage equipment tables loaded with Johnson Rangers, Vikings, and Thunderbolts, and many E.F. Johnson "Matchbox" antenna tuners are still doing the job. In more recent years, the company has become better known for its VHF and UHF public safety communication gear. -- *Thanks to [The ARRL Contest Update](#)*

The ARRL Letter for February 27, 2014 *Your League: ARRL to File "Friend of the Court" Brief in Ohio Antenna Case*

The ARRL plans to file a "friend of the court" or *amicus curiae* brief on behalf of an Ohio radio amateur who has been at loggerheads with his community since 2009 in efforts to erect a modest antenna support structure. The Village of Swanton, Ohio, turned down the application of ARRL Life Member Gary Wodtke, WW8N, for an antenna variance to put up a 60 foot tower. Wodtke appealed, however, and in January the Fulton County Common Pleas Court issued a final judgment in his favor, ruling that federal and state law preempted Swanton's antenna ordinance.

Now, Swanton is appealing that order to the [Ohio Sixth District Court of Appeals](#), asserting, in part, that Ohio's [PRB-1](#) antenna law is unconstitutional, because it conflicts with the state's "Home Rule" statute, which gives communities broad and preemptive regulatory powers. Like the federal law, Ohio's PRB-1 statute calls on towns to "reasonably accommodate amateur station communications and shall constitute the minimum practicable regulation necessary." Ohio Section State Government Liaison Nick Pittner, K8NAP, believes the state appeals court's decision in *Wodtke v. Village of Swanton* could set legal precedent for similar antenna-related cases down the road. An attorney, Pittner was instrumental in getting Ohio's PRB-1 law enacted.



"Appellate decisions are generally final, unless further review is granted by the Ohio Supreme Court," Pittner said in a statement. "While a court of appeals decision represents the law only in that appellate district, it carries significant precedential value in other Ohio courts and may also be cited in similar cases in other states."

In addition to the state's antenna regulation pre-emption law, the application and authority of the federal PRB-1 statute, embraced in Section 97.15(b) of the FCC's Amateur Service rules, will be at issue in the appeal. This case will mark the first time a state PRB-1 law has been challenged in an appeal.

Assisting in the case is telecommunications attorney and antenna rights advocate and expert Fred Hopengarten, K1VR, the author of *Antenna Zoning for the Radio Amateur*, published by the ARRL and now in its second edition.

The Village of Swanton's ordinance established a fixed antenna height of 20 feet above the residential roofline. Wodtke wants to install a 60 foot antenna support structure on his 0.2 acre residential lot; the village allows greater height where the lot is at least 5 acres. While the appeal is pending, both parties have agreed that Wodtke be permitted to install a 40 foot antenna support structure, which complies with Swanton's current ordinance.

International: "Amateur Radio: Your Gateway to Wireless Communication" is World Amateur Radio Day 2014 Theme

The International Amateur Radio Union ([IARU](#)) Administrative Council has designated "Amateur Radio: Your Gateway to Wireless Communication" as the theme for World Amateur Radio Day 2014. World Amateur Radio Day is celebrated each year on April 18 to recognize the anniversary of the founding of the IARU in Paris in 1925. ARRL Co-Founder Hiram Percy Maxim, 1AW, who had proposed the idea the year before, became its first president. The primary purpose of World Amateur Radio Day is to focus a public spotlight on Amateur Radio and its benefits to countries and communities. This year the IARU and its member-societies around the world will celebrate the organization's 89th anniversary.



Each year the IARU Administrative Council selects a World Amateur Radio Day theme that is consistent with the role and purpose of Amateur Radio and that represents a commendable activity that would cast IARU and Amateur Radio in a favorable light. When the Administrative Council [met](#) last September in Mexico, attendees discussed various possible topics and themes, before adopting "Amateur Radio: Your Gateway to Wireless Communication."

As the IARU's [history](#) recounts, in the early 1920s it was generally assumed that the lower the frequency and the longer the wavelength, the better, and "very large antennas and very high power were the rule." Amateur Radio experimenters were the first to discover that the short wave spectrum, far from being a wasteland, could support worldwide propagation. As the rush to shorter wavelengths ensued, however, Amateur Radio, which had proved the value of this spectrum in the first place, "were in grave danger of being pushed aside," the IARU's history notes.

Adopting the philosophy of strength in numbers, Amateur Radio pioneers met in Paris in 1925 and created the International Amateur Radio Union to support Amateur Radio worldwide. Just 2 years later, at the International Radiotelegraph Conference, Amateur Radio gained the allocations still recognized today -- 160, 80, 40, 20, and 10 meters. From fewer than 30,000 licensees in 1927, Amateur Radio's numbers have grown to 3 million. From the 25 countries that formed the IARU in 1925, the IARU has grown to include 150 member-societies.

Today IARU is organized into three regions. IARU Region 1 includes Europe, Africa, the Middle East, and Northern Asia. Region 2 covers the Americas, and Region 3 is comprised of Australia, New Zealand, the Pacific island nations, and most of Asia. The International Telecommunication Union (ITU) has recognized the IARU as representing the interests of Amateur Radio.



The first IARU Congress in 1925 in Paris. [QST, June 1925]

Several IARU member-societies and associated clubs are expected to field special event stations to mark the occasion. This year, April 18 is a Friday. When the anniversary falls on a weekday, public relations activities and operating events marking World Amateur Radio Day take place during the weekend following April 18. -- Thanks to Geoff Atkinson, VK3TL, IARU R3 Director, IARU website

Ham Radio in Space: More Ham Radio CubeSats Expected to Deploy from ISS This Week

Another batch of CubeSats were deployed at noon on February 25 from the International Space Station. While no Amateur Radio satellites were among them, NASA has indicated, "More deployments are scheduled through Friday." NASA said this week that flight controllers from the Japan Aerospace Exploration Agency (JAXA) "maneuvered the Kibo laboratory's robotic arm into position" for the launches. The Multi-Purpose Experiment Platform, which carries the [NanoRacks](#) CubeSats, is attached to the arm. NanoRacks provides CubeSat deployment services through an agreement with NASA. JAXA astronaut Koichi Wakata, KC5ZTA, has been handling CubeSat deployments aboard the ISS.



Four Amateur Radio CubeSats -- LituanicaSat-1, LitSat-1, ArduSat-2, and UAPSat-1, along with the 915 MHz SkyCube -- may be deployed February 28. CubeSats deployments are [streamed live](#). AMSAT-UK has reported that it's unclear whether another Amateur Radio CubeSat, the Peruvian Chasqui 1, which was sent to the ISS on February 5, also will be deployed on February 28.

Eight NanoRacks deployers are installed on the Multi-Purpose Experiment Platform. Each deployer can hold up to six 1U (a unit = 10×10×10 centimeters) CubeSats or two 3U CubeSats. Two 3U CubeSats (6U total) can be deployed every one to two orbits to prevent collisions.

CubeSat deployments from the ISS on February 11, 2014. [NASA photo]

◆ [LituanicaSAT-1](#) carries an FM transponder: Uplink 145.950 MHz/Downlink 435.180 MHz. It also has an AX.25 transponder: Uplink 145.850 MHz/Downlink 437.550 MHz. The CW beacon is on 437.275 MHz.

◆ [LitSat-1](#) carries an SSB transponder: Uplink 435.180 MHz/Downlink 145.950 MHz, and an AX.25 packet transponder: Uplink 437.550 MHz/Downlink 145.850 MHz.

◆ [ArduSat-2](#) will transmit 9.6 MSK CCSDS data on a 437 MHz downlink.

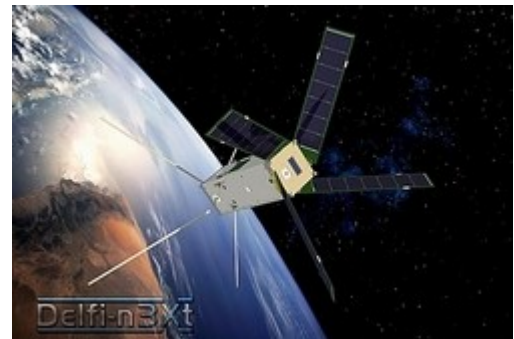
◆ UAPSAT will carry an AX.25 packet transponder: Uplink 145.980 MHz/Downlink 437.385 MHz.

◆ [Chasqui-1](#) will transmit AX.25 format data on 437.250 MHz.

AMSAT-UK has [reported](#) that, in addition to the CubeSat deployments from the ISS, seven Japanese Amateur Radio satellites are scheduled to launch from Earth February 27 at 1807 UTC.

The Amateur Radio on the International Space Station (ARISS) project -- the ARISS-EU "Ham Video" system -- is tentatively set to begin the commissioning process no sooner than the second weekend in March. Ham radio-related activities aboard the ISS typically take a low priority on the astronauts' work agenda.

Meanwhile, there's some bad news regarding the Delfi CubeSat, [Delfi-n3Xt](#). Program Manager Jasper Bouwmeester PC4JB, reported the results of testing carried out on the CubeSat's 435/145 MHz linear transponder. "Unfortunately, we have not heard anything from Delfi-n3Xt since Thursday [February 20], after our transponder test," Bouwmeester said. "Nothing seemed to be wrong, except for the transponder itself not properly working." Bouwmeester said the Delfi team suspects a hardware failure and has been attempting to revive the satellite. Delfi-n3Xt transmits at about 145.870 MHz.



The Delfi-n3Xt satellite. [Technical University Delft image]

Feature: A Century of Amateur Radio and the ARRL

America's "Roaring 20s" had passed and, with them, a period of roaring growth in radio technology. But a large problem had fallen on America, one that began on October 29, 1929 - "Black Tuesday," the day the stock market crash triggered our Great Depression.

Like everyone else, hams had to tighten their belts during the 1930s. Typical ham didn't have enough disposable income to take advantage of the best advances in technology, so they learned to improvise. Amateur Radio continued to grow, both in numbers and accomplishments. Here are some Amateur Radio and ARRL tidbits from the 1930s:

- ◆ January 1930 *QST* announced that phone operation on 20 meters had been authorized.
- ◆ By the early 1930s most hams were using crystal-controlled transmitters, but most hams had only a small number of crystals. The usual procedure was to call long CQs and then tune up and down the band looking for long calls in reply.



- ◆ The first ARRL "International" Field Day was held in 1933. By 1938 more than 1000 stations were participating. The event had become as popular as the ARRL DX Contest and the Sweepstakes.

- ◆ The Communications Act of 1934 created the Federal Communications Commission (FCC), which replaced the Federal Radio Commission. Within a few years, the FCC was monitoring ham stations, to be certain everyone was following the rules and regulations. *QST* warned its readers to be sure their transmitters were operating within the ham bands, because the FCC could measure frequency with an accuracy of 10 cycles per second!

- ◆ By 1936 there were 46,000 radio amateurs in the US; by 1939 the number had risen to 51,000.
- ◆ The ARRL announced the start of the DXCC program in 1937. In 1938, W3CRA qualified for the first DXCC certificate -- quite a feat!
- ◆ League Co-Founder Hiram Percy Maxim, W1AW, died suddenly on February 17, 1936, at age 66. After Maxim's death, the FCC issued the call sign W1AW to ARRL. The Maxim Memorial Station, W1AW, in Newington, Connecticut, was [dedicated](#) on September 2, 1938, in his honor. The ceremony was broadcast nationwide by radio.

- ◆ In May 1936, Eugene Woodruff, W8CMP, was elected by the ARRL Board of Directors as the League's second President. Woodruff was the head of the Departments of Electrical Railways and Radio at Pennsylvania State College.

But then, another World War was upon us. We'll look at hams and the war years next week.



Maxim Memorial Station W1AW.

Membership in **The Bridgerland Amateur Radio Club, Inc. (BARC)** is open to anyone interested in Amateur Radio. You do not need an amateur license to join. Learn more online at <http://www.barconline.org/> or by emailing membership@barconline.org .

The Bridgerland Amateur Radio Club provides the following to its members:

- A repeater system that covers northern Utah from Bear Lake to Salt Lake Valley.
- Events where you can practice your radio skills in a fun learning environment.
- Club meetings are held the second Saturday each month from October to May. An opportunity to meet and learn from other amateur operators.
- Social activities where members can make friends and interact with other members.



Your tax deductible membership supports club activities and the BARC repeater system.



The Bridgerland Amateur Radio Club, Inc.

Membership application for the year 2014

*Dues are in effect January 1, 2014 through December 31, 2014
New Members Only, individual membership dues prorated quarterly
Please indicate if you or family member is an American Radio Relay League (ARRL) member*

Name _____ Call Sign _____ Date Paid _____

ARRL member

P.O. Box _____ Street Address _____

City _____ State _____ Zip Code _____

Home Phone () _____ Work Phone () _____

E-mail _____

(The club's newsletter, THE OHM TOWN NEWS, is sent to the E-mail Address)

Individual Membership - \$25 \$ _____

Addition Family members in same household - \$3 ea \$ _____

Donation for Repeater upgrades / equipment purchases \$ _____

Total \$ _____

Names and Call Signs of additional family members

Name _____ Call Sign _____

ARRL member E-mail _____

Name _____ Call Sign _____

ARRL member E-mail _____

Name _____ Call Sign _____

ARRL member E-mail _____



Bridgerland Amateur Radio Club is an ARRL affiliated club

Mail your completed form and a check to: B.A.R.C., P.O. Box 111, Providence UT 84332-0111 or pay online at <http://www.barconline.org/?q=node/242>

B.A.R.C. is a non-profit organization

Questions for Technician Class License

1. (T1A05) What is the FCC Part 97 definition of a space station?
 - A. Any multi-stage satellite
 - B. An Earth satellite that carries one of more amateur operators
 - C. An amateur station located less than 25 km above the Earth's surface
 - D. An amateur station located more than 50 km above the Earth's surface
2. (T2C11) What is meant by the term "check" in reference to a formal traffic message?
 - A. The check is a count of the number of words or word equivalents in the text portion of the message
 - B. The check is the value of a money order attached to the message
 - C. The check is a list of stations that have relayed the message
 - D. The check is a box on the message form that tells you the message was received
3. (T3A04) What can happen if the antennas at opposite ends of a VHF or UHF line of sight radio link are not using the same polarization?
 - A. The modulation sidebands might become inverted
 - B. Signals could be significantly weaker
 - C. Signals have an echo effect on voices
 - D. Nothing significant will happen
4. (T4A06) Which of the following would be connected between a transceiver and computer in a packet radio station?
 - A. Transmatch
 - B. Mixer
 - C. Terminal node controller
 - D. Antenna
5. (T5C10) How much power is being used in a circuit when the applied voltage is 12 volts DC and the current is 2.5 amperes?
 - A. 4.8 watts
 - B. 30 watts
 - C. 14.5 watts
 - D. 0.208 watts
6. (T6A06) What type of electrical component stores energy in a magnetic field?
 - A. Resistor
 - B. Capacitor
 - C. Inductor
 - D. Diode
7. (T7D06) Which of the following might damage a multimeter?
 - A. Measuring a voltage too small for the chosen scale
 - B. Leaving the meter in the milliamps position overnight
 - C. Attempting to measure voltage when using the resistance setting
 - D. Not allowing it to warm up properly
8. (T8A07) What is the primary advantage of single sideband over FM for voice transmissions?
 - A. SSB signals are easier to tune
 - B. SSB signals are less susceptible to interference
 - C. SSB signals have narrower bandwidth
 - D. All of these choices are correct
9. (T9A05) How would you change a dipole antenna to make it resonant on a higher frequency?
 - A. Lengthen it
 - B. Insert coils in series with radiating wires
 - C. Shorten it
 - D. Add capacity hats to the ends of the radiating wires
10. (T0A04) What is the purpose of a fuse in an electrical circuit?
 - A. To prevent power supply ripple from damaging a circuit
 - B. To interrupt power in case of overload
 - C. To limit current to prevent shocks
 - D. All of these choices are correct

(For answers to test questions see page 14)

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Answers to questions on page 13: 1-D, 2-A, 3-B, 4-C, 5-B, 6-C, 7-C, 8-C, 9-C, 10-B

