

## THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

## October 2006

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http://www.barconline.org

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## PRESIDENTS MESSAGE

There is one thing on my mind this month and that is club officers. It takes a great team of individuals to make things happen in the club. I have had the great opportunity to serve in many positions over the 15 years I have been an amateur radio operator.

Every elected and non-elected position is important. Please consider stepping up and running for office. The office of president as stated in the bylaws must be someone who has held an office before. Please, please consider running for an office to keep the club momentum running. I have been president for three years now, and have really enjoyed it. I have really appreciated the help of all the officers and the board. They have stepped in and made things happen. A big thanks goes out to all of you who help with all the events. We have some of the best events around to participate.

We have a great field day, some fantastic public service events, and great activities. Where else will you



find a single club that has experiments flown altitude balloons, supported the longest single day bike race in North America, and then a week or two later a marathon. In addition to all of that, helped 3 other clubs with their repeater systems. Our ARES/RACES group designed and installed communications ment in an incident command vehicle, and are in-

strumental in the counties emergency communications plan. Hams are organizing in some neighborhoods along with CERT to be prepared just in case. Others are actively offering VEC exams, and classes to recruit other amateurs. The list goes on and one. These are some of the things I can remember during my time as a (Continued on page 2)

### **HAM PROFILE**

by Boyd Humpherys W7MOY

If any of you tend to get bent out of shape for any particular reason we have the answer, might as well keep it in the family. One of our clan has the expertise to put things back in place, or at least where they ought to be. Jeff Jeppsen, KD7YYS has learned a few techniques from his pater, Clint, KB7ZOZ. Regardless of the shape everyone is in, Amateur Radio knows no bounds and the tendency to delve into the black art of electronics afflicts all sorts of the human race.

Jeff has sported a Tech license for three years or so,

manipulates a Yaesu HT and a Kenwood base and mobile. He confided that some unprincipled bounder had a bsconded with his trunk mount antenna. so



he is in the process of persuasion to purchase a new one out of the family budget. All gracious offers would be accepted.

Jeff was born just off highway 89 and a bit south of the small Maddox eatery near Brigham City, Perry to be exact. He endorses the menu down there. The family shifted shortly to Sauerkraut town where the wheel came off the wagon and they decided to stay and pay taxes there. He graduated from Sky View in 79, served a mission for his faith near the windy city in Illinois, then enrolled at USU & participated on a scholarship in a University entertainment group, traversing a wide area in persuading prospective attendees to enroll at the hallowed halls of ivy on the bench east of us.

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## **Club Officers**

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# UPCOMING ACTIVITIES 2006

October 14 - BARC Club Meeting
Don Butler, N5LZ, will be giving us the rundown on DX
including why it is fun and what kind of equipment you
may want to plan on having for your DX station.

October 21 & 22 - Jamboree on the Air http://www.scout.org/wse/jota.shtml

November 11– BARC Club meeting Club elections

December - Club meeting Christmas party, more info later

BARC Club Meetings are normally on the second 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.

The Bridgerland Amateur Radio Club holds a weekly net Tuesday nights at 9:00 PM on the 146.72, the 147.26, the 145.31, the 147.20 and the 449.625 BARC Repeater System with a PL tone of 103.5. It is a directed net and we invite all licensed Amateur Radio Operators to check in and participate.

(Presidents Message Continued from page 1)

member of BARC. There are many more I am sure some of you can come up with.

I look forward to seeing you all at club meeting where Don Butler N5LZ from Mendon will present. Don loves the HF bands and contesting. You can read more about Don, his station, and interests at http://www.qrz.com/callsign/N5LZ

Please join us at club meeting on Saturday the 14<sup>th</sup>. Hope you will put your name on the ballot this year. Our elections will be in November.

N7RXE Kevin Reeve

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

(Ham Profile Continued from page 1)

He spent about 10 years in an interesting occupation that probably few of us have ever known much about, that of harvesting Brine Shrimp eggs out of the Great Salt Lake. A rather fascinating tale of long days and nights on the Northern tip of Stansbury Island in Great During the months of Oct. thru Jan., the Salt Lake. brine shrimp lay their eggs, and thus harvested by scooping the gooey stuff (small enough for about 6 on a grain of sand), into bags for transport to the plant and headquarters of Ocean Star International, in Snowville. There after drying, the eggs are canned and shipped mainly to firms in Asia, where they are allowed to hatch, then fed to the commercial shrimp farms and then the new final product is sent back to us to eat at your favorite restaurants. Now that is an interesting tale of a four month field day, ideal conditions, good propagation, quiet surroundings, lots of generator power, time to read and twirl the dial on the rig, plenty of peanut butter sandwiches, etc. Rough duty. Incidentally the brine shrimp inhabiting the Salt Lake are only about ½" long at best, not edible unless your supplies run out.

There are some accounts of retrieving some dried eggs from 600 year old Indian ruins and still capable of hatching, incredible.

Jeff met his future XYL, Helen Denton, born in Richfield, at USU, decided to share their parking permits and begin a new Jeppsen generation. They have two daughters, Jenna, now engaged, and Vanessa, who incidentally just returned from Seattle after winning a spot in a local competition for the American Idol program. 9,000 contestants must have filled the air with the sounds of music.

Jeff now drives truck for the Old Dominion trucking firm, makes regular nocturnal runs to SLC and other points in the West. Not many on 2 that time of the morning.

Unofficial spousal reaction to Jeff's radio involvement, "Do you have to have that noise going all the time" Sure we do Helen, who knows, our neighbor next door might be on the air today. Glad to have you on the air with us Jeff. 73s.

The ARRL Letter Vol. 25, No. 32 August 11, 2006
==>MARS TO SUPPORT US
TRANSPORTATION SECURITY
ADMINISTRATION IN EMERGENCIES

 $\Diamond$ 

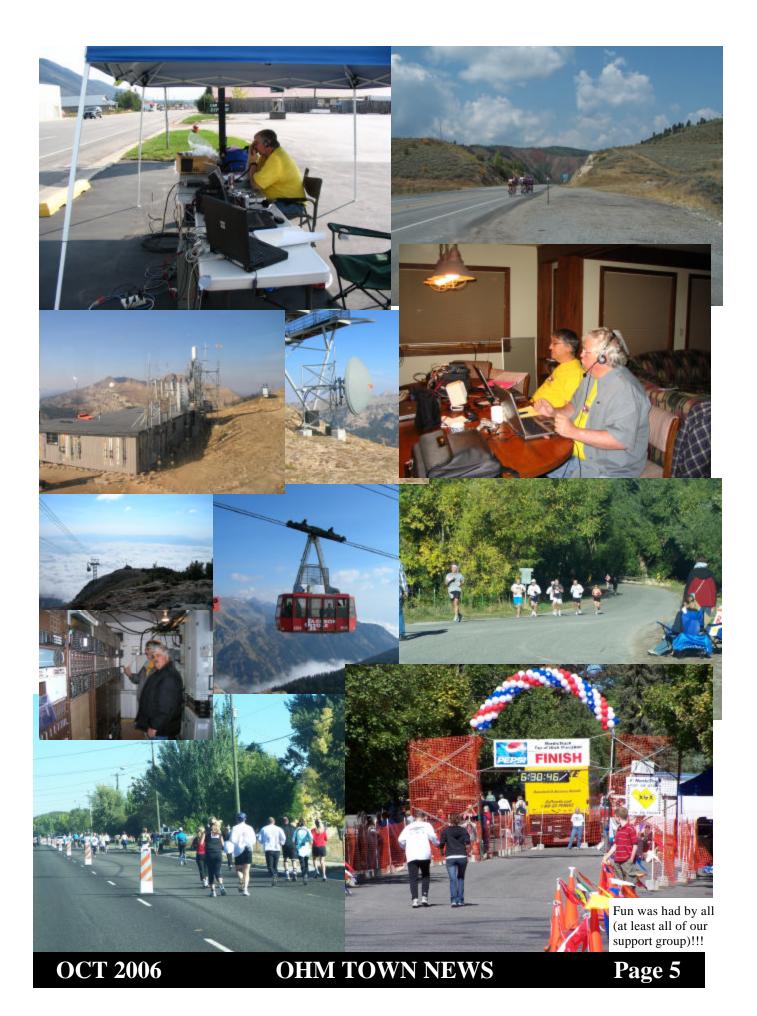
Amateur Radio operators who are members of the Military Affiliate Radio System (MARS) will provide back-up communication for the US Transportation Security Administration (TSA) under a formal agreement announced in July by Army MARS Chief Kathy Harrison, AAA9A. Protecting airports during the hurricane sea-

son will be the immediate focus, she said, adding that the new MARS-TSA collaboration "is likely to expand to other Department of Homeland Security (DHS) areas" in the future. "This is an extensive area and will require member support across the continental United States," Harrison said in a broadcast announcement to Army MARS participants. "We will need many volunteers to man teams assigned to specific geographical areas, starting with airports throughout the hurricane corridor." She called for "physically capable" Amateur Radio operators to volunteer for the assignment. The first airport emergency support teams will be located at four airports in the Florida hurricane belt: Miami, Ft Myers, Jacksonville and Pensacola, Harrison said. She added that recruiting will immediately follow for nine additional potential hurricane targets from Washington, DC to Houston. In a later phase - but as soon as possible - additional teams will be recruited for other hurricane locations including Puerto Rico and the Virgin Islands, and after that, the remainder of the continental US. The emergency support teams - each consisting of four members of MARS - are being assembled under joint sponsorship of MARS and the TSA, with deployment assignments determined by the TSA when and if government's communication systems "Volunteers should be within a reasonable traveling distance to the airport. It will be their responsibility to get to the site when activated," said Harrison. The Memorandum of Understanding, which is already in place, calls for using MARS networks, personnel and equipment to maintain communication during the first 72 hours of incidents involving aircraft, mass transit and pipelines. Seventy-two hours is considered the maximum time needed for federal response organizations to deploy internal emergency communication systems. The MoU spells out the most extensive MARS support mission since the development of the Essential Elements of Information (EEI), which date to the 1994 Northridge earthquake that devastated parts of California's San Fernando Valley. EEIs are alerts to the Pentagon of a natural disaster or other incident that might require a federal response. In a memo to MARS personnel, Harrison included the following points:

- . The Navy-Marine Corps and Air Force MARS organizations are included in the call for volunteers, via their separate chains of command.
- . Army MARS state directors will be responsible for formation of the joint teams.
- . All deployments will be by team, each with a combination of equipment and operator capabilities and members ready to work 12-hour shifts. Some locations may ultimately require more than one team.

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. Required equipment for each team will include HF and HF radios with voice and digital capability, Pactor/Airmail digital messaging, phone patching and emergency power.

. Some locations may have TSA radio gear and emergency power supply to augment the hams' personal equipment. A particular MARS responsibility will be to provide communication interoperability with local, state and national networks, such as the Radio Amateur Civil Emergency Service (RACES) and Shared Resources (SHARES). A separate web of national and regional HF radio networks, SHARES links federal agencies under the DHS's National Communications System (NCS), of which MARS already is a primary partic ipant. The pact calls for a reliable back-up solution "to ensure the continuity of TSA's command and control function during the first 72 hours following any incident interfering with normal communications channels and to provide local, regional and nationwide TSA communications during that time." The existing Army MARS emergency communication network offers such a solution immediately and at no additional cost to the TSA, the MoU points out. Under the MoU, the TSA agrees to provide MARS volunteers with access to its facilities and space for radio equipment. It further agrees to integrate MARS capabilities into its emergency planning and exercises. The Army's commitment includes providing "volunteer MARS radio operators, equipment, and use of the MARS radio networks" and developing "alert procedures and a communications support plan" that "will identify specific frequencies, call signs, and radio operator level duties." Harrison stressed that the decision to volunteer rests with the individual. "The Army has no liability over a member who reports to a disaster site; members will be responsible to TSA personnel." Harrison told the Army MARS membership that she's "very excited" about the new agreement. "This will be a fast-moving recruitment/development action, and I request your support in filling these teams." The chiefs of Air Force and Navy-Marine Corps MARS also are onboard with the new agreement and have messaged their respective memberships to signify their participation and cooperation with Army MARS. Air Force MARS Chief Don Poquette, AGA3C/ KE9XB, has pledged his members' support. "AF MARS will assist to accomplish this mission," he said, pending working out logistical details. Harrison says she and her headquarters staff met recently with TSA and DHS representatives to formalize the details of the cooperative arrangement. She said MARS area coordinators will provide specific requirements to state MARS directors to recruit members and equipment capabilities to support TSA. Signing the MoU on behalf of the Army was Col Mary Beth Shively, chief of staff, Network Enterprise Technology Command/Ninth Army Signal Command. James Schear, General Manager, Operational Plans and Programs, endorsed it for the TSA. Headquartered at Ft Huachuca, Arizona, the Ninth Army Signal Command oversees the Army MARS mission.—Bill Sexton, N1IN

The ARRL Letter Vol. 25, No. 35 September 1, 2006
==>AMATEUR RADIO CAN RIDE OUT THE STORM,
ARRL PRESIDENT TELLS NEW ENGLANDERS
Making his first visit to the ARRL New England Division

Convention August 26-27, League President Joel Harrison, W5ZN, said Amateur Radio has a notable history of riding out stormy weather. Addressing the convention banquet, Harrison cited former ARRL staff member and ham radio historian Clinton B. DeSoto, W1CBD, who in 1928 expressed the opinion that Amateur Radio is not utopia, never has been and never will be. Harrison suggested it's worth looking at ham radio's past when considering the issues it faces today, and there are no easy answers. "There is no one cure-all for whatever you think is wrong with Amateur Radio," Harrison asserted. Offering a thumb nail review of Amateur Radio's history, Harrison pointed out that ham radio has always had to deal with the controversies and tensions that technological, regulatory and societal changes have sparked over the years. Nonetheless, it's survived for nearly 100 years, and some ideas keep resurfacing. For example, a no-code license was proposed in the 1930s, he said, although it wasn't accepted until about a half-century later. "But we still can't seem to get beyond that point," he added, noting the more recent controversies surrounding the elimination of the Morse code requirement for all license classes and license restructuring. "When you look at the history of Amateur Radio, you kind of have to wonder: Where are we going?" Harrison said. The ARRL president went on to offer some of his own thoughts on the subject. "Digital is the wave of the future," he predicted. "Our ability to provide public service will expand." In any case, he said, ham radio will always be in a storm, just coming out of a storm or heading into another storm. Where Amateur Radio goes is up to those who enjoy the many facets it has to offer, he suggested. In closing he quoted ARRL co-founder Hiram Percy Maxim, W1AW: "Make sure everything you do is for the general good." Harrison said it's up to today's radio amateurs to make sure that "DX Is" never becomes "DX Was," and that "Public Service" never becomes "Public? Sorry." Earlier in the day at an ARRL forum, Harrison shared the spotlight with ARRL New England Division Director Tom Frenaye, K1KI, and Vice Director Mike Raisbeck, K1TWF. Much of the discussion dealt with how to reinvigorate Amateur Radio and make it more enticing to newcomers. "There is an unlimited number of possibilities in Amateur Radio," Harrison told the gathering. "If you get bored with one thing, there's another you can look into." Amateur Radio promotion should focus on "this buffet of possibilities," and not just on one activity, such as contesting or public service. Frenaye pointed out that while Amateur Radio gains some 20,000 new licensees each year, it's not keeping pace with attrition by up to 10,000 licensees annually. Harris on reiterated his mantra that the Main Street USA of today is much different than the Main Street of 30, 40 or 50 years ago, when many of today's hams got started in the hobby. Today's Technician license has proven for many to be a dead end for Amateur Radio, he said, because it has not provided enough of an introduction to the wider world of ham radio to maintain interest. On the other hand, the old Novice license, Harrison noted, provided "a connection to the outside world" through its limited HF privileges. "Opening up an avenue to HF privileges opens up an unlimited number of possibilities," he said. "It's time to expand the entry-level license." The FCC has turned away proposals to establish a new entry-level license with limited HF privileges. At a second ARRL forum on Sunday, Harrison told one member he believes the League would always support CW as an operating mode, even if the Morse requirement goes away. "CW is popular, and I can't envision the ARRL taking a position that would not support CW as a mode," he assured the questioner.

### The ARRL Letter Vol. 25, No. 36 September 8, 2006 ==>SUITSAT-1 (AO-54), RE-ENTERS EARTH'S ATMOSPHERE

SuitSat-1 (AO-54) is history. The surplus Russian Orlan spacesuit turned satellite, which became one of the greatest public relations vehicles for Amateur Radio in years, reentered and burned up in Earth's atmosphere Thursday, September 7, at 1600 UTC some 1400 km south-southwest of Western Australia. The announcement came September 8 from Amateur Radio on the International Space Station (ARISS) International Chairman Frank Bauer, KA3HDO. Bauer expressed thanks to "all who made SuitSat-1 the phenomenal event that it was." Launched February 3 during a spacewalk from the ISS, SuitSat-1's 2-meter signal was heard around the world, although at a much weaker signal strength than anticipated. "Your hard work and dedication paid off," Bauer continued. "In just three weeks the SuitSat team developed and delivered a safe satellite system that has gained the confidence of the international space agencies." Bauer also noted the "unprecedented press coverage" that included more than 9 million hits on the SuitSat-1 Web site <a href="http://www.">http://www.</a> suitsat.org> during February alone as well as several prominent mentions in the general news media. "Students around the world had the opportunity to participate in a seven-month 'school spacewalk' with the artwork, pictures, signatures and voices onboard," Bauer pointed out. "And the 'super-sleuth' ham radio operator extraordinaires were able to pull a significant amount of data from the satellite, despite its low signal strength." After SuitSat-1's VHF ham radio payload stopped transmitting earlier this year, AMSAT initiated a "Chicken Little Contest," for participants to guess when SuitSat-1 would deorbit. Winners and more information are on the AMSAT Web site <a href="http://www.amsat.org/amsat-new/ariss/">http://www.amsat.org/amsat-new/ariss/</a> suitsatContest.php>. Bauer said plans for a potential SuitSat-2 will be a discussion topic at the AMSAT/ARISS joint meeting in October <a href="http://www.amsat.org/amsat-new/">http://www.amsat.org/amsat-new/</a> symposium/>. Commented ARRL ARISS Liaison Rosalie White, K1STO: "This unique satellite lasted longer than anyone ever expected, making the ARISS team proud."

## The ARRL Letter Vol. 25, No. 37 September 15, 2006 ==>ARRL GRANTED EXPERIMENTAL LICENSE FOR 500 KHZ RESEARCH BY RADIO AMATEURS

The FCC's Office of Engineering and Technology on September 13 granted Part 5 experimental license WD2XSH to the ARRL on behalf of a group of radio amateurs interested in investigating spectrum in the vicinity of 500 kHz. The two-year authorization permits experimentation and research between 505 and 510 kHz (600 meters) using narrowband modes at power levels of up to 20 W effective radiated

power (ERP). ARRL Member Fritz Raab, W1FR, of Vermont, will serve as experimental project manager for "The 500 KC Experimental Group for Amateur Radio" <a href="http://www.500kc.com/">http://www.500kc.com/"> "I'm kind of excited to see</a> how we can apply modern technology to a 'classic part' of the radio spectrum," Raab told ARRL this week. He pointed out that 500 kHz - the traditional maritime emergency frequency - is roughly geometrically halfway between the 136 kHz experimental band and the 160 meter amateur allocation. "In contrast to 160 meters, 500 kHz is low enough to offer good groundwave propagation, but in contrast to 137 kHz it is high enough to allow us to engage in real communication with realistic equipment." Raab eventually would like to see at least a secondary 600-meter amateur allocation from 495 to 510 kHz. "Besides the opportunities for experimenting at low frequencies, that frequency is well suited to regional groundwave communication," Raab said. He envisions eventual use of the spectrum to provide Amateur Radio emergency communication via groundwave, without having to deal with the vagaries of the ionosphere or causing interference to other services. For about a century, the 500 kHz region was an important band for maritime communication, emergency and otherwise. The band is occasionally used by "heritage" commercial maritime stations, such as the Maritime Radio Historical Society's KPH on the West Coast, on special occasions. 500 kHz remains designated as an official maritime emergency CW frequency, although the vast majority of maritime users have shifted to satellite-based systems. In addition to experimentation and regional emergency work, Raab says he believes that the 505-510 kHz spectrum could serve as "an historic band" that could support various commemorative special event-type operations. Proposals are under consideration in the UK and Ireland to establish an experimental Amateur Radio allocation in the vicinity of 500 kHz. The WD2XSH project calls for operation from 21 discrete fixed sites spread throughout the US. Participants all are electrical professionals, many with maritime radio backgrounds, Raab said, adding that operation already has begun. The group eventually will be seeking reports from nonparticipants, he said. Raab says the gear participants will use represents "every kind of antenna and equipment you can imagine," including surplus vacuum-tube maritime units. At his Colchester, Vermont, location he's using a 42-foot vertical, but others are employing inverted Ls, loops and Marconis, among others. Raab was a co-author of the article "A 100-W Class-D Power Amplifier for LF and MF," which appeared in the March-April edition of QEX <a href="http://www.arrl">http://www.arrl</a>. org/qex/2006/03/toc.pdf>. He's using an amplifier of that design for his WD2XSH operations. The FCC turned down a 1998 petition from the ARRL to create an Amateur Radio "sliver band" in the vicinity of 136 kHz, but some US amateur licensees have obtained FCC Part 5 Experimental licenses to research the possibilities of LF, including transatlantic and transpacific propagation. Amateur Radio licensees in Europe and elsewhere already have access to 135.7 to 137.8 kHz, and several hams in Canada have authorization to operate there using Amateur Radio call signs.

#### **Questions for Extra Class License**

- 1. (E1B11) Which of the following amateur stations may not be operated under automatic control?
- A. Remote control of model aircraft
- B. Beacon station
- C. Auxiliary station
- D. Repeater station
- 2. (E1G01) What does it mean if an external RF amplifier is listed on the FCC database as certificated for use in the amateur service?
- A. An RF amplifier of that model may be used in any radio service
- B. That particular RF amplifier model may be marketed for use in the amateur service
- C. All similar models of RF amplifiers produced by other manufacturers may be marketed
- D. All models of RF amplifiers produced by that manufacturer may be marketed
- 3. (E2E01) What is the most common method of transmitting data emissions below 30 MHz?
- A. DTMF tones modulating an FM signal
- B. FSK (frequency-shift keying) of an RF carrier
- C. AFSK (audio frequency-shift keying) of an FM signal
- D. Key-operated on/off switching of an RF carrier
- 4. (E4B15) For best accuracy, how tightly should a dip-

meter be coupled with the LC circuit being checked?

- A. As loosely as possible
- B. As tightly as possible
- C. First loosely, then tightly
- D. With a jumper wire between the meter and the circuit to be checked
- 5. (E5A23) What is the resonant frequency of a series RLC circuit if R is 47 ohms, L is 4 microhenrys and C is 20 picofarads?
- A. 19.9 kHz
- B. 17.8 kHz
- C. 19.9 MHz
- D. 17.8 MHz
- 6. (E5G07) What is the term for an out-of-phase, nonproductive power associated with inductors and capacitors?
- A. Effective power
- B. True power
- C. Peak envelope power
- D. Reactive power
- 7. (E6B25) What is the input impedance of a theoretically ideal op-amp?
- A. 100 ohms
- B. 1000 ohms
- C. Very low
- D. Very high

THE OHM TOWN NEWS PO BOX 111 PROVIDENCE, UT 84332



## October, 2006

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