Ron Speirs, KC7MYS

Dick Bell, W7TGC, demonstrates his personally designed and constructed 800 mW transmitter at the October meeting

Volume XLIV Issue 10, November 2000

The MICROVOLT

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Prologue

The Utah Amateur Radio Club was organized under its present name in 1927, although its beginnings may date back as early as 1909. In 1928, it became affiliated with the American Radio Relay League (club #1602) and is a non-profit organization under the laws of Utah. It holds a club station license with the call W7SP, a memorial call for Leonard (Zim) Zimmerman, an amateur radio pioneer in the Salt Lake City Area.

Meetings: The club meets each month except July and August. The meetings are held on the first Thursday of the month at 7:30 PM in the Bonneville Medical Building located at 1255 East 3900 South in Holladay, across the street from St. Marks Hospital.

Membership: Club membership is open to anyone interested in amateur radio; a current license is not required. Dues are $15 per year, including a *Microvolt* subscription. The *Microvolt* and membership cannot be separated. Those living at the same address as a member who has paid $15 may obtain a membership without a *Microvolt* subscription for $9. Send dues to the Club Secretary: Gregg Smith, KD7APW, 7546 S. Uranium Dr., West Jordan, UT 84084--3942. ARRL membership renewals should specify ARRL Club #1602.

Contributions: Monetary contributions are gladly accepted. Send directly to the Club Treasurer: Chuck Johnson, 1612 W. 4915 S. Taylorsville, UT 84123-4244. For in kind contributions, please contact any board member to make appropriate arrangements.

Repeaters: UARC maintains the 146.62- and 146.76- repeaters. The repeaters are administered by the UARC Repeater Committee. Comments and questions may be directed to any Committee member. The Lake Mountain repeater (146.76-) has autopatch facilities on both the Orem exchange (covering Santequin to Lehi) and the Salt Lake City exchange (covering Draper to Layton). The 449.10 repeater has autopatch facilities into Salt Lake City only available to UARC members. Due to the volume of traffic, only mobiles should use this autopatch. Autopatch use is open to all visitors to our area and to all club members. Non-members who wish to use the autopatch are encouraged to help with the cost of maintaining the equipment by joining the club.

Ham Hot-Line: The Utah Amateur Radio Club (UARC) has a Ham Hotline, 583-3002. Information regarding Amateur Radio can be obtained, including club, testing, meeting, and membership information. If no one answers leave your name, telephone number and a short message on the answering machine, and your call will be returned.

Publication: The Microvolt is the official publication of the club. Deadline for submissions to the *Microvolt* is the 10th of each month prior to publication. Submissions by email are preferred (wmgooch@concentric.net), but other means including diskettes and typewritten submissions can be mailed directly to: Manford Gooch, 6344 S. Shenandoah Park Ave., Holladay, UT 84121. All submissions are welcome but what is printed and how it is edited are the responsibility of the Editor and the UARC board. Reprints are allowed with proper credits to The *Microvolt,* UARC, and authors. Changes in mailing address should be communicated to the Club Secretary: Gregg Smith, 7546 S. Uranium Dr., West Jordan, UT, 84084-3942.□

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Contents

For late breaking news listen to the UARC Information Net Sundays at 21:00 on 146.62 or set your browser to:

www.xmission.com/~uarc/announce.html □

We are grateful to the management of XMission, our Internet Service Provider (ISP), for the donation of this Web-Page service.

For account information go to:
http://www.xmission.com/

The Microvolt
The Official Publication of the Utah Amateur Radio Club, Salt Lake City, Utah

Volume XLIV, Issue 10, November 2000

QST from the Prez

This month will mark 5 years that I have been in Amateur Radio. I have said it many times before, and I'll say it again, it is the best thing I have ever done.

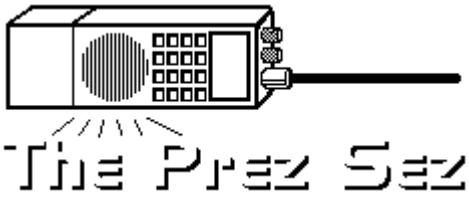
First of all, it is something that my husband Rolf and I share together, and we are having such a good time. Rolf loves DX, and I like talking around this country and especially to my friends right here.

Even before we got our licenses, we joined UARC and found wonderful friends there. I wouldn't change anything.

Many of you are new to Amateur Radio and UARC. If I were to give out advice, it would be to get involved. Come to the meetings, get on the radio, volunteer to help out with Field Day(they can always use your help) and other activities.

Become a Volunteer Examiner, run for office, and learn about the many facets of the hobby That is when it really becomes fun. I'll see you in November for another great meeting.

73',
Maurine.▫



November UARC Meeting

We would all like to improve our stations. Perhaps we would like more power, better antennas, higher antennas, or just more tolerant neighbors. But time and funding may be scarce, so we come a little short of the "Dream Station." The program at the November UARC meeting will be presented by someone who surmounted all the problems and actually built the dream station.

The meeting will be Thursday, November 2, at 7:30 P.M. (See the meeting location page for additional information.) Our speaker will be someone who was active in UARC a number of years back: Mike Fulcher, KC7V, who currently resides in Cave Creek, Arizona. The Mike of 20 years ago appears in some of the photos in the perennial UARC Field Day slide show. Mike will be telling us how to build the ultimate station, and how he went about completing his.

His station is a bit more elaborate than the ones we usually see. It starts with four 100-foot towers and goes on to include 27 Yagis. It

also involves four-squares for 160 and 80 meters.

Apparently Mike doesn't stop with building a station; he operates it too. He is found at the top of the DX honor roll. He is also one of the founders of a club of avid DXers and contesters called "The Voodudes," a group that still holds the multi-multi record for a North American entry in the CQ Worldwide DX Contest.

Of course there will be the "standard" features of monthly meetings as well:

Availablility of ARRL books from Fred, the "book lady";

A chance to sign up for badges, hats, and jackets;

The "Elmer Hour," a chance to get your questions answered by those who have been in the hobby a while; and

The "Meeting(s) after the meeting": A chance to enjoy pizza or other gastronomic delights with other hams.

Thursday, November 2, 7:30 P.M. Don't miss it! Check page 2 and the Ham Hot Line (583-3002) for more place and time information.□

Where Is Your Scanner?

Many of us developed our interest in amatuer radio by coming into contact with a scanner or shortwave set we found around the house. Well, now that you are licensed, where is your scanner?

Scanners are an inexpensive way to have a second radio to monitor what you are doing on the air. The range of available scanners is very wide, just as is the range of ham gear. But it is something you can safely leave at home for your family to monitor, even though you can't talk to them. If they can't talk to you, at least they hear you in a QSO on your way home. They will know where you are and what you are doing.

Scanners can also be useful to people who do not care to get a license, or maybe they believe they are not capable of learning what they need to know.

A scanner in the house can be a way of whetting the appetite of family members who have not quite got the bug yet. When they find out how much fun we are having on the air with our two-way conversations, it may just make them eager to join us. Then, if you follow the scanner with a textbook or computer program, you just might get them hooked.

I still have my scanner by my side at my operating station so I can keep track of what else is going on the bands while I am talking. That way, I rarely miss any calls.

So it is something to think about. If you put your scanner away when you got your license, dig it out of the closet, dust it off, and introduce your family to it. You may find it a useful tool for stirring up some interest in the hobby.

73,
Jack Warren, KC7KEL.□

Hams Sought to Track Rare Migrating Owls

The fall burrowing owl monitoring project is now under way. Amateur Radio operators and others with appropriate VHF radio monitoring equipment are invited to help in tracking their migration.

"I just got e-mail from a biologist that the last of the Regina Plains juvenile owls headed out southward last night," ARRL Amateur Radio Direction Finding Coordinator Joe Moell, K0OV, said this week. "Now is the time to monitor!"

The owls soon should be passing over the area stretching from Montana and North Dakota to Oklahoma, Texas and beyond. Scientists believe the birds fly all the way from Saskatchewan and Alberta to southern Texas and northern Mexico, but accurate data are scarce and difficult to obtain.

For the third year, hams and other

spectrum-monitoring enthusiasts within the migration flight path are requested tune 172 to 173 MHz for the milliwatt-level pulsed transmissions from radio tags on these threatened birds. Amateur reports may help professional biologists to determine exactly where the owls spend the winter.

Unlike other owls, burrowing owls don't roost in trees. They prefer to roost in cavities on the ground in treeless grasslands. The best time to monitor is at night when the birds are on the wing or foraging.

Visit the burrowing owl page on the site of ARRL ARDF Coordinator Joe Moell, K0OV, http://www.homingin.com, for details. This site also tells how to join a new e-mail list for rapid dissemination of tag-heard reports and for coordination of direction-finding efforts.

Joe Moell, K0OV/*ARRL Newsletter*

[*According to the above web site, Utah is within the migration pattern, so monitoring may be productive. -Ed.*].□

Motorcycle Race

I would like to thank those who participated in the national motorcycle race from Wells, Nevada to Wendover, Nevada. Ham radio operators who participated were: Jerry Bennion, Verna Bennion, Cindy Peters, Rex Estes, Max Erickson, John Bingham, Eugene Christensen, Russ Smith, Fred DeSmet, and Gary Openshaw. If I forgot anyone, I apologize.

There were several occasions involving injuries, one serious, in which the ambulance's and medics' cell phone would not work. The following letter was received from Mr. Bob Chavez who was in charge of the race.

"Hello Gary,

It was a pleasure to meet you people this past weekend. I want to thank you all for the time, effort and expense that you and your associates expended. I personally feel that you were a big aid to us in keeping tabs on everything. More importantly, you made the race safer by your presence. We wouldn't have been able to summon the ambulance to gas 2 without you.

I am not sure how long it will take to see where we come in money-wise with the race, but if you will let me know who to make it out to, when we get it all tallied, we would love to make a donation to your club.

We would really like you to consider next year, about the same time frame. I don't have the exact date yet, but hope to soon. I will save your email, phone and address and will try to keep in touch.

For your information, the injured rider from gas 2 was transported via helicopter to the U of U Hospital, where he was discharged yesterday (Monday). He broke his scapula, separated two ribs from his sternum, and fractured his C-3 vertebra. All of his injuries are expected to heal fine in 4-6 weeks. He also expressed his thanks to your people for being able to summon the ambulance.

Thank you again for all of your efforts and please convey our thanks to the others.

Sincerely,
Bob Chavez"

I would also like to thank all those who helped out.

Thank you and 73,
Gary Openshaw, KC7AWU.□

Homebrew Night

October 7 was the date of UARC's annual Homebrew Night event, and it brought forth an interesting array of projects.

Eugene Christensen, KC7CSE, opened the show-and-tell session with his home-wired battery packs for emergency operation, and a novel support for an HF dipole from a vehicle.

Don Scarlet, N7DIZ, showed off a polarity checker for the ubiquitous "ARES" 12-volt connectors. Several Utah Amateur Radio

Emergency Service (ARES) groups have standardized on a 30-amp Anderson Power Pole connector for 12-volt DC use so that anyone's radio may be plugged in to anyone's power source. Unfortunately, the Utah configuration is backwards from the California configuration regarding which side is positive and which is negative. And, occasionally, a Utah ham makes a mistake and wires one the California way. Don's device makes it easy to check a power source before you plug a radio into it. You simply plug his device into the source. If it is wired correctly, a green LED lights. If it is backwards, a red indicator is seen. No lights, of course, means a different problem.

Two young hams showed that they are starting out to carry forward their fathers' interests in ham radio. Theron Johnson, KD7IDG, son of Chuck Johnson, WA7JOS, showed his Science Fair project in which he compared different types of antennas. Andrew Madsen, AC7CF, son of Ron Madsen, KB7OCB, displayed a 10-watt, five-band QRP transceiver built from a kit.

Richard Evans, N7PCE, showed off a unique packaging and switching system for a portable station intended for emergency use. The system lets the operator stay active on several bands and services simultaneously. Microphone and PTT can be switched as desired. Speaker outputs can be switched independently to the operator's left earphone, his right earphone, or to a speaker where the whole crowd can hear.

Eugene McWherter, N7OVT, presented a series of piano-wire antennas for HTs in a variety of colors. They are said to substantially outperform rubber duckies. He also showed an accessory for the Utah call-letter license plate: a flashing red LED to go at the top of the tower picture.

Robert Herkimer, W8BFV, displayed a two-meter Yagi antenna built at zero cost. Following suggestions from a QST article, Bob was able to collect parts from several discarded TV antennas and give them new life on a ham band.

Two hams showed off built-from-scratch electronic projects. Clint Turner, KA7OEI, demonstrated one of the "homing" direction-finding systems designed by Mike Mladejovsky, WA7ARK.

Dick Bell, W7TGC, showed one of the more ambitious projects, a QRP transmitter of his own design. He used two variable crystal oscillators (VXOs) to get twice the frequency range that a single one would allow. This made possible coverage of the entire 40-meter CW band using only three or four crystals. Using a pair of 2N2222s in the final, he was able to get 800 mW of output power.

The final entry was a bit unusual. Dale Heisler, WJ7L, opened by saying, "This isn't my project; it's yours." He went on to describe the system hams have devised to keep track of runners at the Wasatch Front 100-Mile Endurance Run. This system uses multiple networked computers, custom software, and packet radio to keep an almost real-time record of where every runner is on the course. A person at the finish line can inquire about the status of a runner and almost immediately get a listing of the times he entered and exited his most recent checkpoint. Runners who have completed the course can get a listing of their entire checkpoint record. Some of the software has been undergoing refinement for over ten years. Dale felt that the system was a significant project and that it and its developers were worthy of recognition.

Gordon, K7HFV.□

Ron Speirs, KC7MYS

Ron Speirs, KC7MYS

Andrew, AC7CF (top) and Theron, KD7IDG (bottom)

UK-Canada Crossband LF QSO Completed

In the spirit of the early transatlantic tests, a crossband LF-HF contact between the United Kingdom and Canada was completed September 10. The contact involved well-known LFer Dave Bowman, G0MRF, operating on 135.711 kHz and John Currie, VE1ZJ, on Cape Breton Island, Nova Scotia, Canada, operating on 20 meters.

"Dave had a surprisingly strong signal into FN95, Cape Breton Island," Currie said in an e-mail message to Andr' Kesteloot, N4ICK, who's involved with the AMRAD LF experiment in the US.

Using spectral software, Currie reports that he observed "weak dashes" from G0MRF just after 2205 UTC on September 9. He says noise was extremely low. Shortly after sunset on Cape Breton Island he observed a lot of dashes. "It looked like G0MRF was coming across the pond," he said. Bowman's signal was never audible in Canada.

Currie said he had "solid copy on G0MRF" by 2245 UTC, and the crossband QSO was completed on September 10 at 0008 UTC. "I could see every dot and dash," he reported. By 0100 he could no longer copy the signal, and by 0250 UTC they were fading. "I did not see them on the spectrogram again," he reported.

Bowman says he was operating from a 15th floor West London apartment, the home of Sean Griffin, 2E1AXK. The antenna was two sloping 250-foot long wires about 80 degrees apart. Grounding was via the building's plumbing. Loading involved fixed and variable inductors. Bowman estimated maximum power into the antenna at 700 W, but at one point, he dropped his power to about 320 W and VE1ZJ was still copying. "Even allowing for the large antenna, I believe this shows that many UK/EU stations will be able to make the transatlantic path this winter," Bowman said.

Canada has not yet authorized Amateur Radio operation at 136 kHz, but some stations have been given permission to experiment there. Larry Kayser, VA3LK, and Mitch Powell, VE3OT, completed the first two-way LF contact in Canada on July 22 on 136 kHz, using very slow-speed CW (dubbed "QRSS"). Kayser is testing equipment and processes in preparation for the TransAtlantic II attempt on LF set to occur November 10-27 from Newfoundland. TransAtlantic II will attempt to span the Atlantic in both directions on LF. Details on the project are available at:
Http://www.rac.ca/vlftest.htm

ARRL Letter.□

Ron Speirs, KC7MYS

Ron Speirs, KC7MYS

Ron Speirs, KC7MYS

Eugene McWherter, N7OVT(top), Eugene Christensen, KC7CSE (middle0, and Clint Turner, KA7OEI (bottom) at October UARC Homebrew Meeting (see tex,, page 5)

FCC Set to Authorize MURS

With no fanfare, the FCC is set to authorize a new Citizens Band Radio Service to be called the Multi-Use Radio Service, or MURS. The service, which came about as part of the biennial review of Part 90 of the FCC's rules, will deploy five former Private Land Mobile Radio Service VHF "color dot" channels for voice, data and imaging transmissions. The channels, 151.82, 151.88, 151.94, 154.57 and 154.60--will be authorized for up to 2 W on an unlicensed basis under Part 95 of the FCC's rules. The establishment of MURS was buried within a huge Report and Order and Further Notice of Proposed Rule Making released this summer as WT Docket 98-182 and PR Docket 92-235. The FCC said it will "revisit" the issue of allocating additional MURS channels "at a later date should additional support develop." The effective date to deploy MURS is pending completion of the FCC proceeding.

FCC/*ARRL Letter*.□

Member of the Month

This month we are featuring Bruce Leonard, KJ7HZ, the Assistant *Microvolt* Editor. His job is to put the address labels on the *Microvolts* and mail them. Bruce has been in the hobby since 1994 and has his Extra class license.

His father-in-law, Eugene Christensen, KC7CSE, got him into the hobby. They used to go camping together. One day when they were on their way back from Yellowstone they lost one another. It was then that they decided to get CB radios, and that is how they communicated with each other when they traveled. Then Eugene got interested in amateur radio and got his technician license. Eugene tried to get Bruce to get his license, but he just wasn't interested.

One day Eugene came over to Bruce's house and demonstrated amateur radio in his driveway. Eugene was talking on two meters, and Bruce was astonished at how clear the sound was. It was a whole lot clearer than CB. The gauntlet was dropped. Bruce kept moving up the ladder until he got his Extra class license.

Bruce really enjoys chatting with people on 20 meters and 40 meters. He is involved in APRS, which is amateur packet radio. Besides amateur radio Bruce enjoys photography, boating, fly fishing and camping. He is the Advancement Chairman for his son's Boy Scout group. Bruce and his wife Effi have two children -- a 15-year-old daughter and a 12-year-old son.

Our Member of the Month is the only one in his family in amateur radio. He is trying to talk his wife into getting her license, but she prefers her cell phone instead. Bruce is a computer programmer for Convergys. Their main client is direct TV.

Bruce, we appreciate your help with the *Microvolt*. Keep up the good work.□

.

73,

Ron Speirs, KC7MYS

Bruce, KJ7HZ, in traditional mode

Ron Speirs, KC7MYS

Ham Radios in Space

For most amateur radio operators, it is the thrill of a lifetime to receive a "CQ", or general call, from an astronaut in space. But for some, like former astronaut Dr. Owen K. Garriott, call sign W5LFL, the thrill comes from receiving a response from "hams" down on Earth. Garriott, who has been an amateur radio operator for over 40 years, was the first astronaut to take a ham radio into space, pioneering the way for an increasingly well developed amateur radio space program.

"It was my good fortune to take the first amateur radio into space on STS-9 in November 1983," Garriott said. "In my spare time only, I managed to hold up an antenna to the window and to talk to amateurs on Earth."

This contact was the first communication between astronauts and people on the ground outside of "official" channels, which are usually reserved for presidents and heads of state. Owen Garriott pioneered the use of ham radio from Earth orbit during his "spare time" on shuttle flight STS-9 (photo below).

Now, the Space Shuttle frequently carries amateur radio equipment into space where astronauts communicate with students on Earth below.

Hams, as amateur radio operators are often called, use radio transmitters and receivers to talk to other hams all over the globe, as well as to those in space. There are more than 1.5 million licensed hams worldwide, including more than 400,000 Americans.

Every radio amateur must be licensed by the Federal Communications Commission (FCC).

In order to obtain a license, a ham must pass an examination, which includes questions about radio theory, rules and regulations, and International Morse Code. There are three grades of licenses, each at progressively higher levels of proficiency: Technician, General and Amateur Extra. Any licensed ham can chat with the Shuttle.

Once the examination is passed, the FCC issues the amateur operator's call letters. The first letter indicates nationality. In the United States, the first letters are A, K, N, or W.

Garriott had originally proposed the idea of taking a ham radio into space on his first space mission, Skylab 3, but was unable to do so due to timing and other complications. Ultimately, though, he persisted and was able to obtain permission to fly a small hand-held transmitter/receiver aboard the Space Shuttle Columbia. "When in orbit over land, I could make a CQ, which is a general call, and see who responded," Garriott said. "I used a well-designed, hand-held antenna, known as a 'cavity antenna', which could be velcroed to the window. It was about 24 inches in diameter and looked somewhat like a large aluminum cake pan. The transceiver then connected to the antenna."

In addition to the general calls, Garriott had made a few plans to send out a call to specific Earth-bound hams at prearranged times and dates. "I had specified particular times and frequencies beforehand," Garriott said. "Among others, I was able to speak with the Amateur Radio Club in my hometown of Enid, Oklahoma, with my mom, with Senator Goldwater, and with King Hussein, who was an avid ham."

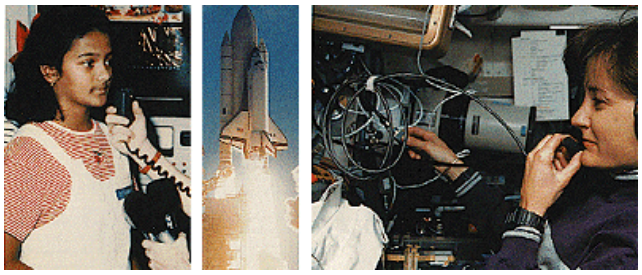
Since that first voyage into space, NASA has continued to see the usefulness of bringing ham radios into space, and astronauts have been able to speak to hams on earth on dozens of shuttle flights, as well as on the space station MIR. "There has been substantial amateur radio activity in space since I first brought one up," Garriott said. "There is now a program called SAREX that is allowing for more and more activity."

The Space Amateur Radio EXperiment (SAREX) is a long-running program to use amateur radio equipment on board the Space Shuttle to involve students in exchanging questions and answers with astronauts in orbit. Students in hundreds of different classrooms across the country are able to ask the astronauts questions about space flight and the experiments being conducted on the mission. It also allows for communication with amateur radio operators on the ground.

SAREX is sponsored jointly by the American Radio Relay League (ARRL), the Radio Amateur Satellite Corporation (AMSAT) and NASA. Students and amateur radio operators can attempt to contact astronauts flying on a SAREX mission through voice, packet (computer) radio, or television, depending on what equipment is flying on the shuttle and on what equipment is available on the ground.

According to the ARRL web site, SAREX missions are planned to begin again during the fall of 2000, and schools can apply to be contacted during the space flight. In addition, in 1997, NASA approved plans to include amateur radio equipment as part of the payload of the International Space Station (Amateur Radio on the International Space Station or ARISS). Since astronauts will have more time in space while on the ISS, more opportunities for ham radio contacts will exist. "Shannon Lucid used a ham radio while on MIR," said Garriott. "NASA saw how using an amateur radio would be a good thing for astronauts to do in their spare time on the space station."

And certainly hams on the ground are eager for contact with the astronauts. Specially designed shuttle "QSL" cards, which are postcards used by hams to confirm two-way contact or reception of a signal, are among the most prized in a ham's collection -- even to a king. "(King) Hussein regarded his 1983 contact with Owen Garriott, W5LFL, on board Space Shuttle Columbia, as a high point in his amateur radio career," reported ARRL Executive Vice President David Sumner in a special bulletin following the death of Jordan's King Hussein, JY1. ("JY1" was King Hussein's call sign.)



Above: Onboard the Space Shuttle Endeavour, astronaut Linda M. Godwin (right) talks to students (left) via the Shuttle Amateur Radio Experiment (SAREX). The payload commander, as well as several other STS-59 crew members spent some off-duty time using the amateur radio equipment to communicate with hams and students on Earth.

Schools [and others] interested in learning more about SAREX and how it can work with their academic programs should visit the ARRL web page: *http://www.arrl.org/sarex/sarexnew.html.*

NASA Marshall Space Flight Center,
Space Sciences Laboratory.□

Contesting Calendar

Ten-Ten Intnl Net QSO Party-CW	0000Z,Oct 28
CQ WW SWL Challenge-SSB	0000Z,Oct 28
CQ DX Contest-SSB	0000Z,Oct 28
HA-QRP Contest-CW	0000Z,Nov 1
IPA Radio Club Contest-CW	0600Z,Nov 4
Ukranian DX Contest-CW/SSB	1200Z, Nov 4
ARRL Sweepstakes-CW	2100Z, Nov 4
North Amer Collegiate Champs-CW	2100Z, Nov 4
High-Speed Club CW Contest	0900Z,Nov 5
IPA Radio Club Contest-SSB	1400Z,Nov 5
High Speed Club CW Contest	1500Z, Nov 5
Japan Intnl DX Contest-SSB	2300Z,Nov 10
WAE RTTY Contest	0000Z,Nov 11
OK/OM DX Contest-CW	1200Z,Nov 11
LZ DX Contest-CS	1200Z,Nov 18
EUCW CW QSO Party	1500Z, Nov 18
All Austrian DX Contest-CW	1800Z,Nov 18
IARU 160 m Contest-CW	1800Z,Nov 18

RSGB 1.8 Mhz Contest-CW	2100Z,Nov 18
ARRL Sweepstakes-SSB	2100Z,Nov 18
North Amer Collegiate Champs-SSB	2100Z,Nov 18
EUCW CW QSO Party	0700Z,Nov 19
EUCW CW QSO Party	1000Z,Nov 19
HOT Party-CW	1300Z,Nov 19
CQ WW SWL Challenge-CW	0000Z,Nov 25
CQ WW DX Contest-CW	0000Z,Nov 25
LI/NJ-QRP Doghouse Sprint-CW	1700Z,Nov 25
ARRL 160 m Contest-CW	2200Z,Dec 1
EA DX Contest-CW	1600Z,Dec 2
TOPS 80m Activity Contest-CW	1800Z,Dec 2
QRP ARCI Homebrew Sprint-CW	1800Z,Dec 2
ARRL 10 m Contest-CW/SSB	0000Z,Dec 9
AGB PARTY Contest-CW/SSB	2100Z,Dec 15

For more comprehensive listings and rules see: www.sk3bg.se/indexeng.htm and www.contesting.com/links/calendars□

Examination Schedule

10/31/2000*+ (Tues.) Salt Lake City
Contact: Eugene McWherter, N7OVT
Phone 484-6355

11/01/00 (Wed.) Farmington
Contact: Marc Uhrey, AB7PL
Phone 771-0105; 536-4782

11/08/2000 (Wed.) Mantua
Contact: Jim Jones, KJ7VO
Phone (435)723-1947

11/15/2000 (Wed.) Provo
Contact: Steve Whitehead, NV7V
Phone 465-3983

11/28/2000*+ (Tues.) Salt Lake City
Contact: Eugene McWherter, N7OVT
Phone 484-6355

12/02/2000+ (Sat.) Salt Lake City
Contact: Gordon Smith, K7HFV
Phone 582-2438; 534-8116

12/13/2000 (Wed.) Mantua
Contact: Jim Jones, KJ7VO
Phone (435)723-1947

+Pre-registration required. Contact the contact person prior to the examination date.

*Only Technician elements (1and 2) given at this session

For more detail either call the contact or refer to the information on the UARC webpage:
Http://www.xmission.com/~uarc□

UARC Jackets and Hats

Official Club apparel is now available through Joe Flurer, KD7EGY, owner of Custom Design Marketing. Hats are available with the UARC logo for $10.65. If you add your call sign to the back of the hat, the price is $13.85. Jackets with the UARC logo on the back and your call sign on the front are $48.92. If you add a small UARC logo to the front, the price is $52.11. Golf shirts are also available with a small UARC logo on the front for $28.71.

All of the above prices include sales tax. You can order your apparel at club meetings or by contacting Custom Design Marketing, 6049 S. Highland Drive, 278-5258. REMEMBER … a portion of all sales goes back to the Club to support the repeaters. Wearing the apparel also helps promote the Club.□

Ron Speirs, KC7MYS

Robert Herkimer, W8BFV, at the October UARC Homebrew Meeting (see text, page 5)

[*As indicated in a previous issue of* Microvolt*, there were high hopes in California concerning the anticipated signing of PRB-1 legislation into law. Consequently, many in the amateur radio community were extremely disappointed by the action taken by the governor of California as described below. -Ed.*]

California Governor Vetoes PRB-1 Bill

California Gov Gray Davis has vetoed a proposed Amateur Radio antenna bill. The measure, SB-1714, had passed both houses of that state's legislature. Davis had until September 30 to sign the bill. ARRL Pacific Division Director Jim Maxwell, W6CF, and Southwestern Division Director Fried Heyn, WA6WZO, expressed extreme disappointment at Davis' action.

"We are disappointed, to say the least, by this decision of the governor," Maxwell said in a statement on behalf of Heyn and himself. "We are also puzzled, for SB-1714 was passed unanimously by both the Senate and Assembly, and to the best of our knowledge had no organized opposition."

Maxwell said the "1714" Steering Committee would be reviewing the decision and deciding on a course of action over the next few weeks. The California legislature has adjourned and will not be back in session until next January 3.

The California measure carried a price tag of between $70,000 and $100,000 to fund studies and a model ordinance that lawmakers required. In a statement to the California Senate, Davis said he declined to sign the bill because funds for the studies were not included in his budget.

In his statement, Davis also said the topic of amateur antennas was "a local rather than a state issue."

Amateur Radio operators in California had been urged in recent weeks to write Davis to encourage him to sign the measure into law. The bill was aimed at incorporating the language of the limited federal preemption known as PRB-1 into state law. SB-1714 would have required any ordinance regulating Amateur Radio antenna structures to "reasonably accommodate amateur radio service communications" and "constitute the minimum practicable regulation to accomplish the legitimate purpose of the city or county."

So far, 10 states currently have incorporated PRB-1 wording into their statutes.

Gov Davis' statement is available *http://www.governor.ca.gov/briefing/pressreleases/oct00/sb1714101.html*

ARRL Newsletter

Notice
UARC Ham Luncheon

In November, the luncheon is at La Puente at 3434 South State Street. It will be the second Thursday of the month which is Nov. 9, 2000 at 1130 hrs MST, 1830 GMT.

The bill of fare that is so popular there is either the smothered burrito or the special which is generally a small combo.

Talk-in is generally on the 146.620 repeater.

Kerry,
KK7JO.□

Another Long-Distance FRS Rescue:

An 11-year-old Marysville, Washington, girl helped rescue a stranded and injured hiker 100 miles away on September 24 when she picked up his call for help on her Family Radio Service UHF H-T.

Mikayala Whitley was playing Sunday with the little transceiver outside her home in north of Seattle when she heard the call for help and responded. She was able to keep in contact with injured hiker Michael Wyant, 49, throughout the afternoon. The girl's parents called authorities, who launched a rescue with the youngster acting as a communication relay between the hiker and rescuers. Wyant was picked up by a helicopter later that afternoon, treated at a hospital and released. He also called to thank his radio rescuer. The FRS units -- which operate in the 462 MHz range -- have a typical range of a couple of miles.

In June, two young Oregon brothers were credited with quick thinking after they intercepted a plea for help transmitted via an FRS UHF transceiver by some injured mountaineers more than 80 miles away. Those hikers also were rescued as a result.

REACT International has suggested the adoption of FRS channel 1 (462.5625 MHz) with the CTCSS tone disabled as a national call channel. REACT says it came up with the idea after lost hikers in Southern California spent 40 minutes calling on 14 different FRS channels using 38 different tones. In that case, an 11-year-old boy, Kristofer Moore, heard the distress call on his FRS H-T while camping with his family.

News reports; REACT/ARRL.□

Cool That Rig!

Have you ever felt the back of your radio after hours of operation (or especially after a long transmit session)? It can be extremely hot, and may cause damage to itself.

My Standard C5608D 2m/70cm dual-bander suffered from this problem to an extreme degree. After only one hour of receive operation, the heatsink recorded a temperature of 47ºC, when the air temperature was only 28ºC!

I fixed this problem by increasing the ventilation space from 2cm to 8cm and installing an 8cm square fan above it which operates as soon as the rig is powered. I took the fan out of a broken computer power supply which I purchased for $1.00 from a hamfest in May 2000.

By the way, you can buy these fans new for $30.00 at most electronics stores, but why pay that much, when you can get one for almost nothing?

After testing (on a 26ºC day), I found that the fan can cool the heatsink from 45ºC to 21ºC (a reduction of 24ºC) within four minutes. My radio felt cold to the touch, which was excellent outcome, I thought.

My rig no longer suffers from heat stress (loss of characters from LCD display) and is now working to its optimum potential. This idea is an old one, but after experiencing these fantastic results, I thought it necessary to share it with you.

Actually, the second feature of the fan is to keep **me** cool on a hot day, but that's another story!

Daniel Bartlett, VK4TDB/*Contesting.com*

[...*More*...]

My shack used to be in our attic room which would get up to about 35 C in the summer. After a couple of hours on my FT847, it would drop back the output. It was because it was getting too hot, and the set was limiting power output to try to allow additional cooling. I also used PSU fans to cool the rig and power supply which also got very hot. To cool myself, a 12V car radiator fan was used. Run at 12V, it was like a turbine (loud and too powerful). I was using a working computer PSU to power all of them, and so I took the 5V output for this fan and it worked a dream. I still use the smaller ones for the PSU and rig even though I have moved my shack.

There's enough to worry about in a contest, without your set malfunctioning because of the

heat.

73,
Rob, MW5EPA/*Contesting.com*

[...a*nd more...*]

Make sure the fans draw the air out of the rigs and have plenty of places for the air to get into the rigs. The fans, if pressuring, the rig will charge the dust particles and cause the dust to cling to the internal components of the rig. Very bad.

Vic, AD8K/*Contesting.com*.□

PHASE 3D LAUNCH DELAYED

AMSAT News Service reports the launch of the next-generation Phase 3D Amateur Radio satellite has been delayed until mid-November. The launch agency, Arianespace, had tentatively planned to launch Phase 3D and three other payloads on or about October 31 aboard an Ariane 5 rocket. A new tentative launch date for Ariane Flight 135 has not been announced.

AMSAT-DL Executive Vice President Peter Gülzow, DB2OS, has indicated to ANS that one of the payloads scheduled to travel into space with Phase 3D has not yet arrived at the European Spaceport in Kourou, French Guiana, but was due to be there "very shortly." Once on-site, the payload still must undergo a detailed launch preparation campaign similar to the one Phase 3D now is completing. In addition to Phase 3D, the Ariane 5 will attempt to orbit the PanAmSat PAS 1R communications satellite and two British Space Technology Research Vehicle microsatellites, STRV 1C and STRV 1D.

Gülzow says Phase 3D's fueling operations now are complete. Loading of ammonia was the last step in the fueling process -- Phase 3D is only the world's second satellite to use ammonia in its fuel. The satellite also will carry dinitrogen tetroxide, an oxidizer, and monoethylhydrazine, a fuel. Loading each chemical fuel took approximately two days -- the first to set up the operation and the second for the actual fueling.

Phase 3D team members already have checked out the RF, computer, electronic, and mechanical systems for the satellite before buttoning it up for the last time prior to launch. Phase 3D's solar cells were fitted and tested using high-intensity lights to verify electrical output and battery charging capabilities. In addition, the satellite was fitted into the support bearing structure--or SBS--that will cradle Phase 3D on its ride into space.

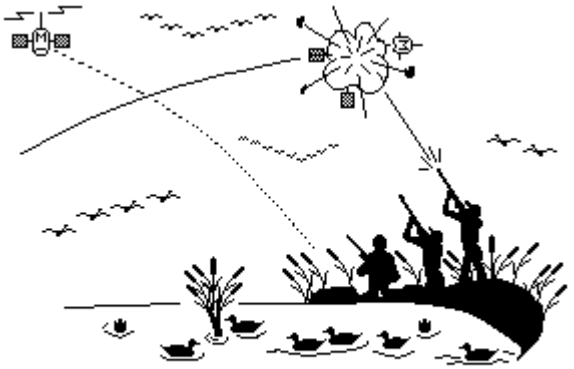
Phase 3D soon will be moved into the final assembly building at the European Spaceport, where the satellite will be mated to the Ariane 5 launch vehicle. The new satellite, at more than 1400 pounds and nearly 20 feet across, will be the largest Amateur Radio payload ever put into space. Once in space, Phase 3D will be nudged by its onboard thrusters into an elliptical orbit that will put it at 4000 km (approximately 2485 miles) from Earth at its nearest point and 47,700 km (approximately 29,900 miles) at its farthest. The satellite, with an estimated ten-year lifespan, will provide Amateur Radio coverage over North America, Europe and the Far East on several bands from HF through microwave.

Gülzow has reminded satellite operators planning to use Phase 3D that it could be a few months after launch before the satellite is ready for general amateur use.

For more information, visit the AMSAT-NA Web site:.

http://www.amsat.org/

ARRL Letter.□



MY HAM FRIEND SAYS THEY'RE CALLED LITTLE LEOS. HE SAYS SHOOT ALL YOU WANT!

United States Postal Service

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Rons Speirs, KC7MYS

Richard Evans, N7PCE, demonstrating his portable emergency station at the October UARC Homebrew Meeting