



A broken anchor rode and 87 mph winds can leave a DXpedition boat in a less than favorable position. (Photo by Ron Jones, K7RJ)

The
Microvolt

Periodicals Postage Paid

October 2003

Please Send Dues to:

UARC

c/o Gregg Smith

7546 S. Uranium Drive

West Jordan, UT 84084-3942

SEND TO

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 University of Utah Engineering and Mines Classroom (EMCB) building, Room 101.

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, K7APW, 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 (uarc@xmission.com), but other means including diskettes and typewritten submissions can be mailed directly to: Tom Schaefer, 11678 Littler Rd., Sandy, UT 84092. 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.

UARC 2003 Board

President: Brett Sutherland, N7KG	298-5399
Executive VP: Laurie "Mac" McCreary, K7LMM	571-5759
Vice Pres: Gordon Smith, K7HFV	582-2438
Secretary: Gregg Smith, K7APW	255-0344
Treasurer: Chuck Johnson, WA7JOS	268-0153
Microvolt Editor: Tom Schaefer, NY4I	501-0899
Asst. Microvolt Editor: Bryan Morgensen, KD7LEA	
Program Chair: Linda Reeder, N7HVF	364-7006
Program Chair Rulon Holyoak, AC7GR	968-3698
Imm. Past Pres: Mark Richardson, W7HPW	465-7650

Committee Chairpersons and Members

"Book Lady": Fred Desmet, KI7KM	485-9245
Historian: Ron Speirs, K7RLS	968-4614
Field Day Chair: Laurie "Mac" McCreary, K7LMM	571-5759
Club Trustee: Tom Schaefer, NY4I	501-0899
Engineer: Randy Finch, K7SL	277-7135
ATV Engineer: Clint Turner, KA7OEI	566-4497
Board Liaison &	
Autopatch Engineer: Gordon Smith, K7HFV	582-2438
Provo Autopatch Host &	
ATV Engineer: Dale Jarvis, WB7FID	224-3405

Contents

Prologue.....	2
UARC 2003 Board.....	2
QST from the Prez	3
Upcoming Testing Sessions.....	4
Second Time's the Charm.....	5
October Meeting	8
FCC Requests assistance on unlicensed 10m operations	8

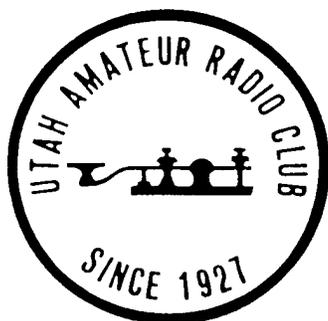
For late breaking news listen to the UARC Information Net Sundays at 21:00 on 146.62 or set your browser to:
www.xmission.com/~uarc/announce.html

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



The Microvolt

The Official Publication of the Utah Amateur Radio Club, Salt Lake City, Utah
Volume 47, Issue 8, October 2003



QST from the Prez

Brett Sutherland, N7KG

It's time again for everyone's favorite meeting of the year. It's time to clear off your bench and find those unfinished projects from the last 12 months. Or perhaps you've bought all the parts, but not started on a project. Whatever it is, it's Homebrew night at UARC!

Homebrew more than anything embodies what Ham Radio is all about. My logic for this bold, neigh, pivotal statement lies in the very beginning of Part 97. The premise, the *raison d'être* for Amateur Radio is quoted below.

97.1 Basis and purpose.

The rules and regulations in this Part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.

(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.

(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communications and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

Perhaps you noticed that items (b), (c) and (d) all have to do with the technical aspects of Amateur Radio. I would argue that, while modern radios make communicating easier, (a) and (e) are not optimal without the other 3 being fulfilled. The tenets of Part 97 couldn't be clearer. We are granted our station licenses with the intent that we will provide communications, international good will, advancement of radio art, continuing improvement of skills and an increase in the body of electronics experts. The charge is set before you by the FCC. If you are an Amateur Operator, you have a responsibility to increase your technical knowledge and expertise.

I can think of four great ways to achieve this objective. First, go back and read the study materials for your current and prior licenses. I've done this and stuff that made little sense before has new meaning for me. Second, purchase technical books from Fred Desmet, KI7KM, the "Book Lady". No ham shack is complete without an ARRL Handbook. It covers most of what you need to know about the technical side of the hobby. Third, find yourself an Elmer. You'll make a lifelong friend and have someone to mentor you. Utilize the Elmer list. You can get a copy at the club meetings or from the club. Lastly, start to homebrew. It doesn't have to be complicated. Make one of the small station accessories that pop up in QST. Or, you could order a small electronics kit. It could be a regenerative receiver, an LED Christmas ornament (Bob has a few of those in stock), a preamp, an antenna, a sound card interface or any of a myriad of other projects. Kits make a great beginning place for you to learn how to solder and become familiar with components. Over time you will want to work on more challenging projects. This is when the Handbook and an Elmer come in very handy. I wouldn't call myself a "true homebrewer", but I'd like to be. I would define that as someone who designs their own circuits and implements them.

In addition to fulfilling the Basis and Purpose by increasing our technical expertise, homebrewing is great fun. There is tremendous satisfaction in looking around the shack at the things you've made. In my case, some of my projects don't work. Some work great. However, I've learned from all of them, regardless of the outcome. I still have a great deal to

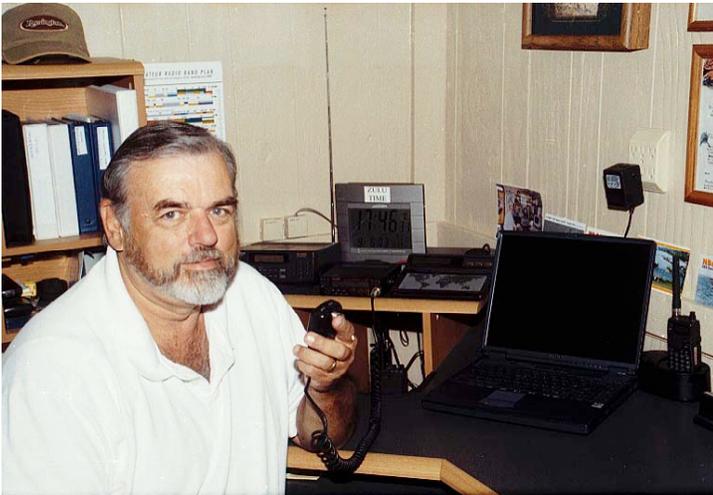
learn Homebrew has proven to be my best way of learning. Practical application sinks in a little deeper for me. Perhaps you are the same way. I think my first attempt at homebrew was regulating 12V. My first handheld doesn't like 14.5V from the car. Then I made a mag mount for 2m. And the rest, as they say, is infamy! Or was that history?

So, build something. It's not only a continuation of tradition, it's our charge and a great source of entertainment. Put something together and show it off at the club meeting! I for one look forward to seeing what you've brewed up.

73 de N7KG Brett

Member of the Month

Linda Reeder, N7HVF



This month we are featuring Roy Eichelberger (W7ROY). Roy has been in the hobby for 24 years. He has his general class license.

Roy came in contact with amateur radio when he was in the 6th grade in Orangevale, California. A ham radio operator came to class and gave a demonstration on amateur radio. He set up his equipment and they were able to talk all over the world. Then when Roy was in the military he was working at Hill Field Air Force Base in ground to air communications, which included the Air Force MARS station program. Back in those days they, had an Air Force MARS station on base. Roy was working with an amateur radio operator Joe Stilwell (WA7YTL). They became great friends and Joe would let him talk on his radio. When Roy got out of the military he received his first amateur radio license in 1980. On April 23,1981, Roy received his technician license and in November 2002, Roy obtained his general class license.

Roy now works for ADT Security Systems as a senior service technician. Roy and his wife Bonnie have 5 children; two boys and three girls.

Roy's wife Bonnie is thinking about taking that amateur radio class which is being taught at welfare square. Roy is a member of the Army MARS program, UARC, the VHF Society and West desert ARC. Roy is putting up an IRLP repeater. The frequency will be 448.375. The PL tone hasn't been decided yet and they haven't decided where the repeater will be located. Roy says he loves talking on IRLP. He has made contacts from all around the world.

Roy, we wish you the best in all of your endeavors and we are looking forward to talking on your IRLP repeater.

Upcoming Testing Sessions

Date	Location	Contact
10/04/2002	Salt Lake	Gordon Smith 582-2438
10/15/2003	Provo	Steve Whitehead 465-3983
10/15/2003	St. George	Ron Sappington 435-673-4552
10/28/2003	Salt Lake	Eugene McWherter 484-6355

Communication Products Amateur Radio Sales

**7946 S. State St., Midvale, UT
801-567-9944**

**Open Weekdays 10-6
Saturday 10-5**

**Come See the New ICOMS
Featuring Their
Amateur/Receiver
Lines Now On Display**

<http://www.commproducts.net>

**Bob Wood, W7OAD
UARC Member**

Second Time's the Charm

(The Fremont Island Expedition)

Part 1: It Seemed Like Such a Good Idea

Gordon Smith K7HFV

The rumors of our deaths (not to mention divorce, incarceration, and, worst of all, out-of-band operation) have been greatly exaggerated. Nevertheless, we had a couple of very colorful weekends on Fremont Island in late August, so it is time we let the UARC members in on the story.

In ham radio we can work a person for years but totally miss an important aspect of the person's life. Many of us have come to know UARC President Brett Sutherland, N7KG, but may have missed that he is a weekend sailor, running a 24-foot sailboat, Allegro, on the Great Salt Lake.

Some months back Brett and Executive Vice-President Lauri ("Mac") McCreary, K7LMM, hatched the idea of combining sailing with ham radio and doing a DXpedition to one of the Great Salt Lake islands. After all, we read about folks going off on DXpeditions to the south Pacific islands and spending a week operating on the beach while having scantily-clad native girls bring them food and drink. Maybe some of the fun could be had on a tighter budget by going to a closer island.

One problem was how to get pileups rivaling the DXpedition to Bouvet when we would still be in the middle of the adjacent 48 states. It was the "US Islands Award" program that came to the rescue. This program, whose web site is at <http://www.eng.mu.edu/~usi/>, encourages people to collect U.S. Island contacts. It has many of the country's workable islands already cataloged, including eight of the Great Salt Lake's thirteen named islands. It offers awards to people who work a large number of U.S. Islands. The easiest is the award for working 100 of them.

Our choice of island was ultimately Fremont Island, which sits about five miles north of Antelope Island where Brett keeps his boat. There were a number of considerations in choosing an island. There had to be some hope of landing there without drawing shotgun fire or the wrath of the rangers. There had to be some hope of a workable anchorage. It would help if there were some area that was pleasant to operate from. And we would have the best chance of pileups if the island had never been on the air before. Fremont Island seemed to meet all these requirements, particularly since Brett knew how to contact the owners and had a good chance of getting permission to land there.

The Island was originally surveyed by a party led by explorer John C. Fremont in 1843. He named it "Disappointment Island" because of his disappointment at not finding game there. In the years that followed the island was used by cattle

ranchers, served as a home for a judge and his family, and even became the exile ground for a convicted grave robber. At various times it was called Castle Rock Island and Miller Island. It was another government surveyor, Howard Stansbury, who in the 1850's gave it officially the "Fremont" name after its discoverer.

After months of planning, a three-day operation was envisioned. In addition to Brett and Mac, the party had now grown to include Clint Turner, KA7OEI; Ron Jones, K7RJ; Kelly Anderson, KV7V; Mike Collett, K7DOU; and the author, Gordon Smith, K7HFV. The group set out on Friday morning, August 22nd. At least the departure was supposed to be in the morning. There was so much gear that it took over two and a half hours to load the boat. Departure was, in fact, still before noon, but not by a wide margin.

The lake is low. At the time of our trip it sat at an elevation of 4196 feet, the lowest it had been since the early 1970's. However, this posed no serious problem due to the shallow draft of Brett's boat and the fact that the main channel we needed to travel had a depth of about ten feet.

The trip to Fremont was pleasant and uneventful and took about an hour and a half. The weather forecast included a chance of afternoon and evening thunderstorms, but a little darkening in the west did not seem like a serious threat, especially with Utah in the midst of a four-year drought.

The next challenge was to find reasonable places to anchor and to land. We moved along the western shoreline of the island. Some of the party took a dinghy and began to explore the shoreline while Brett checked the anchorage. Initial checks of what the anchor brought up were not encouraging. We seemed to be sitting over rock rather than mud. The shore party seemed not to be moving and after trying to shout back and forth, we began to wish we had a better way to communicate. Maybe if there were some kind of code that could be exchanged by people at a distance, or better still, if there were some kind of magic box one could talk into and have one's words heard some distance away? Probably not practical.

We weren't quite sure whether to keep our attention to the east where the shore party was, or to the west where a rapidly darkening sky seemed to be gaining importance. Over the next few minutes Brett's attention seemed to concentrate more and more strongly on the west. He turned us back to the south and began moving as quickly as possible to where we knew there was a better anchorage. We were racing against a distant white line on the water that suddenly seemed not so distant any more. We dropped anchor and Kelly, Ron, and Mike started a second trip to shore in a dinghy loaded heavily with equipment.

Brett's concern seemed to be growing. Some clues included his passing out the foul weather gear, passing out the personal flotation devices, and suggesting that we go below. I think it was the instructions on how to abandon ship that really got our attention.

And then the storm arrived with a flourish. In less than five minutes we went from a placid lake to six-foot waves, fierce winds, and visibility of only a few tens of feet. The boat tipped wildly to one side and then the other, its mast tracing an arc near 70 degrees. (We've been informed that the proper terms for the boat's motion are heeling and broaching, although at the time we thought of more colorful words. Tom has assured us, though, that they don't meet postal regulations.) Following Clint's lead, we tried to keep our weight as low as possible and move to the high side as the boat kept changing its mind on which way it wanted to lean. The view to the outside was memorable as it alternated (rapidly!) between water and sky. We got to wonder what would happen next. Would water come pouring in from an unexpected direction? Would we find ourselves crushed under generator number 2? Or would we just wake up and find out the whole thing was a dream? I'm sure the Lagoon amusement park can't beat the ride we had.

A "scrunch" sound that echoed through the hull sounded particularly ominous, but Clint assured us it wasn't the boat scraping bottom; it was merely the three 100-amp-hour batteries making their way from one side of the cockpit to the other.

Brett, who later had a few words to say about those batteries, was having his own adventure in the cockpit. Not only did he have to keep his wits about him through the wildly changing attitudes of the boat, but also had to endure being soaked from waves that were breaking all the way over the boat from the bow. He had practically no control over the boat. The five horsepower motor couldn't begin to buck the waves, and hoisting sails would have been unthinkable.

Just when we thought things couldn't get any worse, they did. Brett sensed a change in the boat's behavior and realized the anchor line (which is called a "rode") had broken and we were adrift. This was a potentially life-threatening situation. Many people have been killed or injured by abandoning ship and then being crushed by the vessel they had just left. So Brett gave the word to get ready, but held off further action until things stabilized.

It wasn't long before things felt entirely too stable. We had been blown ashore and, though surrounded by water, were completely beached. Brett saw that each of us made it off into the water and finally left the boat himself.

While our ride had been a bit, ahhh..., unstable, at least we had managed to stay warm and dry. Our friends ashore in the dinghy had not been so fortunate. Ron writes:

By the time we had found suitable landing for the dinghy and had unloaded one small load of gear, the rain started and the wind built. As the dinghy came back for more gear, we were deciding if we should haul everyone off the boat to ride out the storm or if we should haul more gear out since the storm should soon pass. We decided to take one more person to shore along with more equipment.

We had three people on shore and four in the boat when the storm hit. The wind suddenly built to a giant furry with sand and small rocks pelting us. I was on shore helping move the gear to higher ground as the lake was literally devouring the beach. Visibility dropped to nil and the lake that was so peaceful and placid only minutes before now had giant breakers crashing over the sailboat. Those of us on land grabbed what we could and headed for higher ground.

Kelly writes:

Mike and Ron were hauling gear further inland while I pulled the boat out of the water. I was setting the anchor for additional security when the storm hit the shoreline. I started for higher ground, the wind nearly pushing me over. Then the force of the wind began driving sand and pebbles horizontally through the air, striking my exposed calves, arms, and head with bee sting like pricks. I instinctively began running toward the rocks rising from the beach, about 150 yards from the waterline. This decreased the impact velocity of the airborne projectiles, but I was slowed by trying to slough through a field of briny mud.

I Joined Ron and Mike and we scratched around for a tarp amongst the few items of gear that had been brought from the beach. This we managed to drag over us, and thus we sat against the rock, soaked to the bone and pelted with rain and pebbles.

The violent swirl limited visibility but by and by we were able to make out the shape of the sailboat. It was being tossed relentlessly in 6 foot rollers. The bare mast was swinging rapidly in a near 90-degree arc as the boat seemed to be dangerously pushed toward the shore.

Then our motorboat was seen rolling before the wind, making its way down the beach, and into a wide ribbon of water formed along the beach by the storm surge. A couple of us left

our shelter to run after the boat, wading into the water and dragging the boat, once again, onto the shore and away from the ever-advancing waterline. We removed the motor and turned the boat over in an attempt to prevent the wind from carrying it away again.

Turning back to the sailboat, we were horrified to see that it had been hove onto the beach. It was hard aground, resting at a steep angle between its hull and keel, mast tilted toward the island.

Those of us newly ashore found a strange situation. We thought we were on the shore when we no longer had to wade, but there in front of us was a water channel nearly three feet deep. We looked around at the position of equipment that had once been on shore but now was sitting in water and realized the lake level had risen more than two feet. I had never heard the term "storm surge" before, but now began to understand. Massive amounts of water had moved into our part of the lake from points south. We later found out that at one point the level back at the Antelope Island marina had dropped nearly eighteen inches.

Trying to get to the newly receded shore line wasn't entirely trivial. The new channel had a very slippery, irregular bottom, and a wind force that one could barely stand up against didn't help to maintain one's balance. I tried looking back toward the sailboat, but the wind-driven salt spray, which was still coming at us almost horizontally, stung my eyes so badly that I could not keep them open.

The next concern was to make sure no one went into hypothermia. Ron explains,

"All we could do was sit there, wait it out, and try to stay warm. The wind was not cold and the lake temperature was nearly 80 degrees, but the effects of wind chill are real and I started to chill. I had plenty of extra clothes in the boat and was not in immediate danger, but I was very uncomfortable."

Brett had likely gotten the worst of the storm, being exposed to the entire event, but was cheerily discussing our next move. Our situation was this: We could not easily get back to the mainland without assistance. The sailboat might or might not still be floatable. The weather forecast for the rest of the weekend had degraded. It might or might not stop raining sometime soon.

Most of our gear was still intact, so, theoretically, we could go ahead with our operation (possibly in the rain, wind, and lightning). Perhaps we could tell the rangers, "We need desperately to be rescued, but not until Sunday." All things considered, though, it was decided to get the people off the island as soon as practical and worry about the sailboat and the gear later. The state rangers were contacted on the marine

band and they agreed to come for us as soon as the storm died down enough to make navigation practical.

We had one further challenge to deal with: getting all of us out to the rangers' boat. The rescuers, not wanting to get themselves in need of rescuing, could only get within about 200 yards of the shore. The wind had now reversed and was blowing strongly away from shore. The dinghy was still floatable and its oars, once lost, had again been found. But its motor was no longer functioning, and the dinghy certainly couldn't carry seven of us at once. Another important consideration was that one of our party was a non-swimmer. Getting out to the ranger boat would be easy enough, but getting back for the second load was a different story. Even the strongest of us was unlikely to be able to row against the current.

Fortunately, Brett had plenty of line, so the solution was to tie a line to the dinghy from shore, and let the shore party assist in getting the dinghy back for the second load. All went as planned. The first party waded out far enough to float the dinghy and get in. They made the trip out, unloaded, and then Kelly brought the dinghy back with some towing assistance from Brett, Mac, and me. In a short time we were all aboard the ranger's craft and headed back to Antelope Island, being pushed by 400 horsepower.

We learned that it hadn't been our imagination that the storm had been a bad one. Three trucks on I-80 had been blown over and a remote weather station on Hat Island, just a few miles away from us, recorded peak winds of 87 miles per hour.

The day's adventure ended with dinner at the Layton Crownburger. We were joined there by Hall and Anne Blankenship, KC7RAF and KC7RAG. Hall had been wonderfully helpful in taking messages on two meters and relaying them to families.

The death toll at this point came to one cell phone, one handheld, and one SWR bridge that had succumbed to salt water, along with several parts of the dinghy, including the motor.

Clint summarized the day's activities by suggesting that Fremont knew what he was doing all along when he gave the island its original name. Kelly ended his account with simply "And this is why you didn't hear us on the radio!"

Next month: The fools return

October Meeting

Gordon Smith K7HFV

It's that time of year again; time to show off your home-built amateur radio equipment. This year's Homebrew Night will be on Thursday evening, October 2. Bring your latest construction projects and be ready to explain them to the group. Everyone who shows off at least one item will receive a small award.

Rules are that the item should be usable in some aspect of amateur radio and cannot have been shown at a previous UARC homebrew meeting. If the item is something too large to bring in, say, a five-element full-sized 160-meter beam, then bring slides, video, drawings, etc. sufficient to explain and show what was built.

Everyone will get a few minutes to explain his entry and tell of its virtues. Exactly how much time is allocated to each entrant will depend upon how many entries we have.

Even if you haven't built anything lately, you'll want to attend this meeting and see what clever things our fellow amateurs have been doing. Homebrew night is typically one of the best-attended meetings of the year.

That's Thursday, October 2, at 7:30 P.M. in room 101 of EMCB on the University of Utah campus. For details on getting to the location, see page 2 or the UARC website.

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

- Availability of ARRL books from Fred, the "book lady";
- A chance to sign up for badges, hats, and jackets;
- An opportunity to join UARC or renew your membership
- The chance to meet face-to-face the people you talk to on the air
- The "Elmer Hour," a chance, after the meeting, 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.

FCC Requests assistance on unlicensed 10m operations

Brett Sutherland N7KG

The FCC has issued the following request:

"This referral is made pursuant to Section 4(f)(4)(B) of the Communications

Act of 1934, as amended, 47 U.S.C. 154(f)(4)(B), and the "Amended Agreement

Between the Field Operations Bureau of the Federal Communications Commission

and the American Radio Relay League, Inc. Regarding the Use of Amateur

Volunteers.

We request the assistance of the ARRL Auxiliary in identifying, over the next 6 months (May through October), any unlicensed operation in the Ten Meter Amateur Band, whether from business entities including trucking companies, truckers or other individuals operating domestically. We do not request direction finding, but would appreciate, where possible, the names and cities of the operators, and license plate numbers and state if from a vehicle.

Please use your best judgment as to whether to include tapes, and please use case number 2003-583.

Thank you."

Contact Brett for more information