



The MICROVOLT

Volume XLVI Issue 5, May 2002

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Putting up a Tower: Part One Costs and Preparation

John Hansen
KI7AR.



Photo: John Hansen, KI7AR

Mark, W7HPW, bolting the 5BA to the mast

In mid-2000 I made the decision to join the brotherhood/sisterhood of Hams who reach for the sky in an effort to make the whole world their backyard. I had decided to buy and install a tower. That decision was the beginning of an adventure that lasted almost 2 years and involved far more than I ever suspected. I've been asked to do a 2-part piece on my experience and what I learned along the way. There were surprises in store for me before I reached my goal. I learned that there are a lot of choices to be made and lots of planning to be done if you are going to buy a tower. I learned that costs would be substantial, and even though I went for quality, I could easily have spent more. I also learned that a tower is the ONLY way to go. As I write this, this past week I have made contacts

with Shanghai, China; Pretoria, So Africa; United Arab Emirates; and more - much, much more - places that were only names on a map before "The Tower."

But, back to the beginning. The story comes naturally in two parts. First, the cost & the preparation; second, the acquisition and the installation. Let's deal with Part One this month.

For my installation, I decided on a crank-up tower that would be free of guy wires. A good part of this decision was based on the fact that I just might have to climb that tower someday, and at 58 and a few pounds over, the closer the top came to the ground - the better. I selected US Tower's TX-472 with a retracted height

of 23 feet and an extended height of 72 feet. Cost? At the source, over \$6,000 - but by going through Texas Towers I pared that price back to just over \$5,000 - more than \$1,000 less. Quite a savings! Part of the considerable cost was the addition of a positive pull up/down motor drive which would allow me to pull the tower down if it got caught up with the wind blowing. I had a year and a half to save since the rule in our house is no borrowing for depreciating assets.

Choosing antennas proved very difficult, but my choice was driven by a desire to avoid traps and select a proven product. I kept hearing about Force 12 and the great antennas they made, and ultimately my choices were the Force12
Continued on page 6.

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 Infina 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 dueto 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 the 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 Santaquin to Lehi) and the Salt Lake City exchange (covering Draper to Layton). The 449.10 repeater has autopatch facilities available to UARC members into Salt Lake City only. 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 information, testing, meeting information, 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 listed under "Submission Schedule of Editorial Content for The *Microvolt*." Submissions by email are preferred (K7CPM@arrl.net), but other means including diskettes and typewritten submissions can be mailed directly to Associate Editor Ted Cowan, KC7PM, 1889 E Foxmoor Place, 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.

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 Autopatch Engineer: Gordon Smith, K7HFV 582-2438
 Provo Autopatch Host &
 ATV Engineer: Dale Jarvis, WB7FID 224-3405
 Repeater Monitor: Allen Wright, N7QFI 268-8482

Exam Schedule

04/30/02* (Tues.) Salt Lake City
 Contact: Eugene McWherter, N7OVT
 Phone: 484-6355

05/08/02 (Wed.) Mantua
 Contact: Jim Jones, KJ7VO
 Phone: (435) 723-1947

05/15/02 (Wed.) Provo
 Contact: Steve Whitehead, NV7V
 Phone: 465-3983

05/28/02*(Tues.) Salt Lake City
 Contact: Eugene McWherter, N7OVT
 Phone: 484-6355

05/31/02 (Fri.) Roosevelt
 Contact: R Chandler Fisher, W7BYU
 Phone: (435) 722-5440

06/01/02 (Sat.) Salt Lake City
 Contact: Gordon Smith, K7HFV
 Phone: (H)582-2438 (B)534-8116

06/08/02 (Sat.) Logan
 Contact: Clyde A. Best, AC7KN
 Phone: (435) 563-9492

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

For more detail either call the contact or checkout the information on our webpage
<http://www.xmission.com/~uarc>

Submission Schedule of Editorial Content for The *Microvolt*

The *Microvolt* editorial team has made a commitment to providing the club membership with a quality publication that will be in your hands prior to the meeting of the publication month. This means you should be able to count on being reminded of upcoming meetings and events before they happen. In order for this to happen we must have two things: quality material submitted to the associate editor, Ted Cowan, KC7PM, and submitted prior to the deadlines listed below.

Meeting	Submission Deadline
Thu Jun 6	Tue May 14
No July Mtg	Tue June 12
No UARC board published in August	
Thu Sep 5	Tue Aug 13

This schedule will be revised and published in subsequent issues of The *Microvolt*. We sincerely hope that this will help those who wish to make submissions make our deadlines.

The *Microvolt* Editorial Team -Bruce -KI7OM., Ted KC7PM, and Bruce, KJ7HZ

More on Editorial Content Submission Standards

The *Microvolt* Editorial Team wishes to make submitting documents for potential publication as easy as possible. A contributor or writer should feel free to submit text, preferably via email, in any format, within reason, of popular wordprocessors they are comfortable using. Writers should keep in mind that the Editors in producing *The Microvolt* use a standard font and layout. All submitted material used will be stripped of formatting and converted to these standards. Please keep your formatting of submitted documents as simple as possible. Simple ASCII text is easiest to handle - the less stripping we have to do, the less time it takes to prepare.

Net Schedule

VHF Nets

Day	Time	Freq.	Name/Purpose
Sun.	2100	146.62 MHz	Utah Amateur Radio Club Information Net
Mon.	2100	147.18 MHz	High Valley Net (Ragchew)
Mon.	2100	144.25 MHz	Weekly 2-meter SSB net
Tues.	1900	146.98 MHz	West Desert Amateur Radio Club & 145.37 MHz
Tues.	1930	146.90 MHz	Ogden Amateur Radio Club
Tues.	2000	146.94 MHz	Utah VHF Society (business and swap)
Tues.	2100	147.34 MHz	Utah Valley Amateur Radio Emergency Service
Tues.	2100	146.72 MHz	Bridgerland Amateur Radio Club Net
Wed.	2000	146.88 MHz	SL County Amateur Radio Emergency Service
Wed.	2000	145.43 MHz	Utah Box Elder -Thiokol Net & 145.20 MHz & 448.43 MHz
Wed.	2100	146.74 MHz	Mercury Amateur Radio Association, SL area
Wed.	2100	145.49 MHz	Mercury Amateur Radio Association, Ogden area
Wed.	2100	145.37 MHz	Mercury Amateur Radio Association, Provo area
Wed.	2100	50.125 MHz	Weekly six-meter net
Thu.	1900	147.42 MHz	Davis County Amateur Radio Club & 449.925 Mhz

HF Nets

Day	Time	Freq.	Name/Purpose
Daily	1230L	7272 kHz	Beehive Utah Net (formal traffic handling)
Daily	0200Z	3937 kHz	Farm Net (Same UTC summer and winter)
Daily	1930L	3708 kHz	Utah Code Net (formal traffic handling)
Sat.	1100L	7272 kHz	Quarter Century Wireless Association (QCWA)

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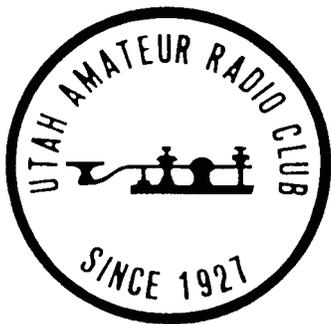
For net times and frequencies, testing details and late breaking news listen to the UARC Information Net Sundays at 21:00 on 146.62 or set your browser to: www.xmission.com/~uarc/announce.html

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The Microvolt

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Photo: Ron Speirs, K7RLS

QST From the Prez

Memories

I was sitting around thinking about what to put into this month's column, just reviewing in my mind all the activities from my earliest memories of ham radio.

I carry a scar on my right index finger, acquired when I was four, from the burn that I received from putting it into my father's operating kilowatt amplifier. I spent many hours as a 6 year old, scanning across the frequencies with a crystal set my father made for me. I used to work with Dad, handing him tools and supplies with the smell of rosin from the soldering iron, and the thrill of the smoke test, something I still enjoy.

When I was eight I was climbing the radio tower in the back yard, bringing Dad tools that he forgot before he went up work on the antenna That cured my fear of heights! By the time I was twelve I was building my own projects. My first was a sixth grade school project. I wanted to construct a map of the United States with a contact in the location of each State capitol. A list of their names was along one side with contacts next to each name. And with a pair of probes, touching the correct pair, a buzzer would sound indicating that you had selected the right combination. Got an A on the project.

I was building binary counting chains with relays when I was thirteen and after several different models, I stumbled across a way to use them to build an elementary phone system and soon had direct dial from room to room in my parents' home in California. My mother was very patient with all of the wires strung up and down the hall and across the family room.

The high school years brought planning and building more and more elaborate radio and station accessory projects. There are collections of books and parts that I still have and haven't built yet. Of course the nature of the project has changed or abandoned over the years but the materials still serve a useful purpose. Each one is a treasure of memories.

Which brings me to the intent of this article. Let us not neglect the responsibility to pass on to all those around us the knowledge and experiences that we all have in common with Amateur Radio. Become an Elmer to someone; there is no better way to share your passion for communication and technical subjects. Share your enthusiasm with those interested parties; the best way to increase our own enthusiasm is to share it.

73, Mark W7HPW □

ARRL Section Manager Comments

I certainly enjoyed sharing my thoughts about amateur radio and the American Radio Relay League with you at the April UARC meeting. I was very pleased to answer the many questions and provide information to those who asked questions during and after the meeting. Please feel free to contact me any time by email at ac7cp@arrl.org if you have any question about Amateur Radio and ARRL. I also would like to thank the many club



Members who are also members of ARRL for their continued support and desire to be affiliated with ARRL. Welcome to those who joined ARRL last meeting you will find it has many neat activities and events that you are supporting by being a member.

As we approach summer give some thought to volunteering to support your club with Field Day and any other public Service events UARC is involved with. If you watch the Microvolt you will see what's being scheduled during the next few months, and don't be afraid to step forward and volunteer to assist – you will have a new experience and get to know some of the greatest people in ham radio!!!!.

If you haven't checked out the Utah Hamfest website please log on now and do so at www.utahhamfest.org! Make your plans now to spend an interesting weekend down at Bryce Canyon July 12,13,14. You will also get to meet the ARRL President, Jim Haynie, W5JBP, and learn from the great seminars that are scheduled. We will have some great prizes and remember to register early and get your hotel, RV or campsite accommodations. I hope to see many of the UARC members at the Utah Hamfest this year.

73 de Mel Parkes, AC7CP

Featured Member: Kim Smith, KD7MYZ



Photo: Ron Speirs, K7RLS

Kim Smith, KD7MYZ

This month we are featuring Kim Smith, KD7MYZ. Kim is a new ham whose husband David Smith, KD7LRK got her interested in the hobby. He bought her a radio hoping that would get her interested. Shortly after receiving the radio, Kim heard about the (UARC) Women's Class, conducted a year ago. She took the class and obtained her license.

Kim enjoyed the class so much that she would like to see another one like it for children. Kim would really like to get her children involved in amateur radio. Kim and her husband David have three children, two boys and one girl, ages 18, 13 and 9.

What Kim likes best about amateur radio is people. She enjoys talking to people and meeting new people. Her favorite people event is Field Day. She is a member of UARC and would like to become more involved with club activities, such as Field Day. [Field Day Committee: Kim can be reached at home at 955-9437 or her office at 233-8118 ext. 1028 – Editor]. Kim also enjoys the UARC Steak Fry and loves to go to hamfests.

Kim helps out on the UARC Information Net, held on the 146.62 repeater every Sunday night at 9:00 PM. She provides other club information on the second Sunday of each month.

Kim works as a nationwide customer service representative for True Vision, supporting laser surgery across the United States.

Another hobby that Kim is really involved in is animals and serves as an advocate for homeless animals. Kim strongly believes that all pets should be spayed or neutered. Kim cares for seven cats, two dogs, and two birds.

Kim, we wish you the best in all of your endeavors.

73, N7HVF Linda Reeder □

May Meeting: John Lloyd on Repeaters

John Lloyd, K7JL, is the current frequency coordinator for the Utah VHF Society. In this position, John is the clearinghouse for repeater information and frequency utilization within the state of Utah for the amateur VHF, UHF, and microwave bands. More than a quarter-century of field experience gives John an extensive knowledge equipment operation, repair, and modification, as well as practical knowledge pertaining to propagation and the identification and resolution of interference issues.

John obtained his first license when he was in Jr. High School in 1967, and by 1970 (in High School) he upgraded to Extra class. John has been president of the VHF Society and is the DARS (Deseret Amateur Radio Society) president for 2000-2001.

John is the primary force behind the Intermountain Intertie (a.k.a. the "Snowbird Link System"), being the one who usually does the installation, repair, and maintenance of these (and other) affiliated repeaters along the Wasatch Front.

John will speak on the subject of the Snowbird Link System and repeater operation in general.

Lauri, K7LMM

April Meeting Notes: Mel Parkes, ARRL Section Manager, on the ARRL

Mel started his history in Ham Radio by telling of an incident when he was just old enough to drive a car. He was driving his dad's 1948 Dodge in Bountiful and was pulled over for speeding. The policeman, who was also a Ham, knew Mel's father, Ira Parkes K7ERR. He didn't give Mel a citation, but sternly advised him to tell his father about the incident. By the time Mel got home, the policeman had already contacted his father by ham radio. Mel was impressed by the speed and efficiency of the radio contact.

Mel had a hangup over learning the morse code. He had been practicing code on an IBM-XT computer, and was with some other hams while they were sending code to each other. The other hams tricked him into taking the code test. When they declared that he had passed, he then went to another testing session and passed the Novice element. It took him another 5 years to get his General ticket, KD5PWQ. He later changed his call sign to N5UVP.

He encouraged all to get friends into the hobby. As the ARRL Section Chief, he told of the many benefits of ARRL membership, and of the services that the ARRL provides to Amateur Radio. In his position with the ARRL, he assists those who are trying to get permits with government entities. He urged us to write our congressmen about the Restrictive Covenants bill and about frequency spectrum possession. Another bill which is introduced every year in the Utah legislature is the "Distracted Driving" bill. This bill needs to have amateur radio exemptions, which are lacking in its recent versions. The ARRL also helps in directing problems to the right person at the FCC.

The ARRL gets very involved in amateur radio issues, including political issues. There are many threats to amateur radio. The bands which we currently use are greatly coveted by commercial interests, and those users would bid many millions of dollars for them if they were to be auctioned.

We must show that we are effectively using our bands, and we must make sure that the people in government know this.

Mel announced that Jim Haynie W5JBP, ARRL President, is going to speak at the Utah Hamfest this July. In Utah, Mel has a number of appointees, such as with ARES. They do a wonderful job. John Mabey is also involved with the "official observer program." He encouraged courtesy and tact if we hear someone do something wrong or inappropriate on the air.

Mel said that passing traffic is becoming a lost art. He told of his experiences in the southeast during Hurricane Camille. Ham radio was the only way to communicate for about two weeks. We practice traffic handling here in Utah on nets, such as the Beehive net.

He encouraged participation in Field Day. The ARRL also sponsors contests. Mel encouraged us to respond to contest calls. The ARRL has an outgoing QSL service so that we don't have to send individual cards to contacts. The ARRL also has much information for their members.

There are about 10,000 hams in Utah, of which about 1,200 are members of ARRL. If hams join ARRL through UARC, the club gets a portion of the money for their activities.

Mel also plugged the Utah VHF Society. All of the money they gather goes to support repeaters in Utah.

73, Ron K7RLS □

K7O: More fun than we could stand!

(Editors Note: Photographs from this event were published on the cover of last month's issue but the report reached me too late to be included.)

During the Olympics, as many of you know, we ran a special event station under the call of K7O. It was a rousing success. The desire of amateurs all over the world to be connected with the Olympics resulted in almost instance pileups as soon as we announced that the special event station was on the air. Contacts were made on every continent, in over 90 countries and 45 states. At many times we generated pileups that were truly astounding.

We did have a few equipment problems. One time the operators hunted me down and complained that no one could hear them. The transmitter tripped an overload breaker! Other than that we operated for almost 48 hours and made almost 3000 contacts!

I should have had a sign-in sheet to keep track of every one that came and participated. But all I know for sure is those that signed the operator sign-up sheet.

Many thanks to KC7WRR, K7LMM, KD7MML, W7WES, KC7HON, NT7M, AC7CF, KD7KNA, K7RLS, KC7LNR, KL0PC, KD7OLF, W7MR, and many others for coming and making it such a huge success.

Now all we need is a bunch of volunteers to open all the mail from all over the world and fill out the QSL's and mail them back! Any takers? [Mark can be reached at w7hpw@arrl.net - Editor]

Mark, W7HPW □

Olympic Special Event Station W7O/QRP

Peri Cope, WH6YT, a self-confessed sucker for Special Event stations, loves to QSL. He especially likes to collect DX and special event "wallpaper." Peri worked an SE station around Christmastime and attempted to work W7A on the USS Arizona on December 7th. With these experiences in mind, Peri decided to find out what it took to get a special event call sign. When he found out how simple it was, he decided to take the plunge for the Olympics and W7O was on the air.

Working QRP and with his ham shack under renovation, Peri managed about 25 QSOs. His contacts included stations on 10m SSB around 28.5MHz and AM around 28.1. Peri also worked 2m and had 3 or 4 QSOs through the 146.62 repeater. He also got in a handful of QSOs on 2m simplex on '52, operating before work and during breaks.

No pileups, but as the only W7O operator Peri felt that it was a good experience. Even though he couldn't spend much time on the air, he would like to do it again.

Ted, KC7PM □

Announcement: New License Classes to be Taught

UARC is sponsoring two upcoming classes for aspiring hams. If you or someone you know would like to get licensed, please respond as follows:

Adult classes, taught by Dick Abbott K7MZ, k7mz@arrl.net. This is a faster paced course to begin probably in June. Contact Dick at (801) 943-0370

Youth classes, taught by Ron Speirs K7RLS, rspeirs@xmission.com. The class will be designed especially for young prospective hams. Class will begin after the school year ends in June. Contact Ron at (801) 968-4614.

2002 UARC Survey Results

The UARC 2002 Board thanks all those who took a few minutes to complete the recent survey. We received 72 completed survey forms. This is about 15% of the club's membership. Because some answers were left blank, the data from the various categories will not sum to a meaningful total. Despite this shortcoming, the results are interesting.

License Class

Technician.....	26
Technician Plus.....	6
General.....	11
Advanced.....	2
Extra.....	23

Special Amateur Radio Interests (Most frequent to least)

Mobile Operations.....	35
Field Day and ARES (tie).....	33
Homebrew.....	27
Phone.....	26
Ragchew.....	25
RACES and DX (tie).....	24
Portable HF.....	18
Satellite.....	17
Digital and Mobile HF.....	15
Contesting.....	14
CW.....	12
QRP Phone.....	10
Elmer.....	8
MARS, Net Control, Traffic Handling and VE (tie).....	7
Awards.....	6
QRP CW and EME (tie).....	5

Suggestions for future topics (No special order)

- Antennas - theory; construction, tips, comparisons, experiences of members
- Portable HF - tips, experiences of members
- Introduction to HF and license upgrade
- Follow-up from the Olympics
- Ham Radio and the Internet
- Linear amplifiers - types, tips, comparisons, experiences of members
- ATV-SSTV
- Digital modes
- DXpedition experiences
- Equipment representatives
- Microwave for beginners
- Ham Radio on a budget
- Ham shack show and tell

73, Lauri K7LMM □

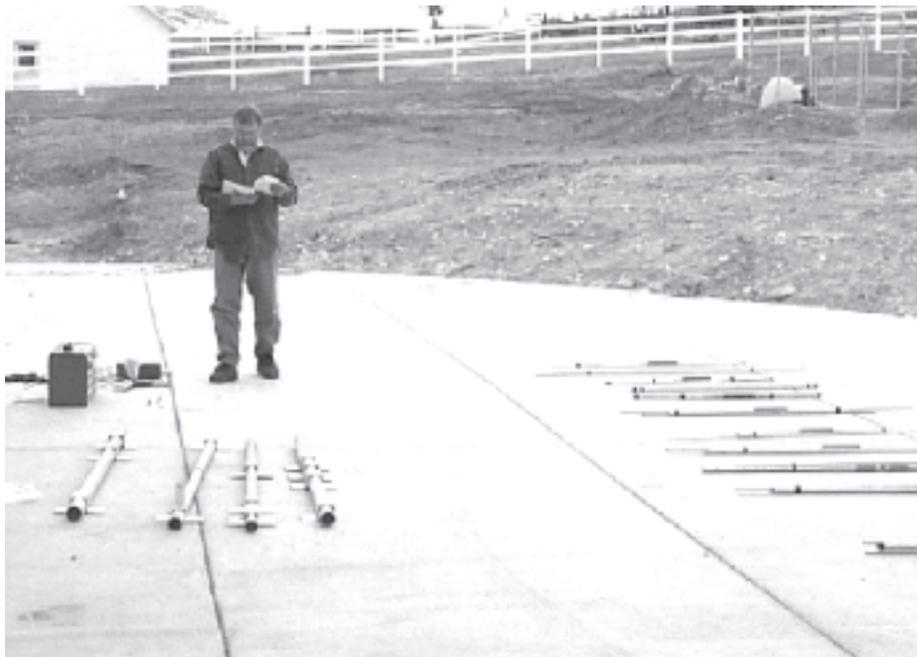
Continued from the cover page.

5BA, EF-140, and EF-180B. I had the help of Tom Schiller - owner and inventor - who listened to what I wanted, asked what kind of contacts I wanted to make and what kind of tower I was buying, and then advised me. I made this purchase ahead of time in August of 2001, six months before I needed the antennas, because Force 12 had a 10% off sale and Tom was willing to store them for me until I needed them. Total cost with shipping was right around \$2,200.

With that decision made, and my location in South Utah County selected, I started a process I had been through once already with my friend Mark Richardson (W7HPW) who had erected a tower of the same height in the same neighborhood. We immediately ran into some very serious road blocks. Utah County, it seems, has an inviolable rule limiting radio towers to 40 feet - a rule intended to keep the 'unsightly' things low to the ground, and exceptions were made only for the big guys - commercial radio & TV stations.

My friendship with a County Commissioner greatly shortened the process as he helped us present the County Attorneys' office with a copy of PRB-1 - an FCC issuance that effectively limits the ability of city, county, and state governments to put absolute height restrictions on towers used by Amateur Radio operators. Our request for a review and an opinion by those attorneys resulted in a ruling that Mark's tower could be allowed, IF we jumped through some other pretty awesome hoops. Those included recertification of his engineering drawings by a Utah Engineering company, an Electrical Impact Survey, a construction permit, an inspection of his base prior to pouring, and - most important - a formal exemption from the county statute by the County Appeals Board - a body that considers appeals from Planning Commission decisions.

This last little item - the Appeals Board process - involved posting a notice to all our neighbors giving them an opportunity to object to our towers, and required us to wait 60 days for responses and then to appear at the notice meeting to make our cases. Both Mark & I spent that time contacting our neighbors and selling them on what a great idea it is to have a Ham in the



Darryl, AF7O, looking at the instructions - 5BA laid out in the driveway

Photo: John Hanson, KI7AR

Neighborhood in case of emergencies. When it was my turn, I only ran into one objection, and that was resolved by agreeing to plant a pine tree in a location of the neighbor's choosing to block the view of the tower from her back porch. Done! One pine tree was going to be the cheapest part of the solution, it appeared. The entire process took about three months and added about \$750 to the cost. When I went through this process again for my tower, costs were about \$300 less because I was able to use Mark's Electrical Impact stuff.

What can you expect in costs? If you go new, as I did, and reach for higher than 50 feet, it can be pricey. Here are my numbers. \$5,000 for tower, \$1,000 for base (hole, concrete, and steel), \$800 for tower shipping, \$2,200 for antennas, and \$500 for bureaucrats. Time? It took about 20 months after making the initial decision, but actual ordering, manufacturing and shipping actually takes 3 to 4 months. Looking for used is a very viable option and there are some pretty good deals to be had if you're willing to look, travel, and take down. But - on with my experience.

The tower was ordered and being built, the antennas were ready to ship, the hole for the base had been dug, the steel reinforcing and cement had been paid for, the inspection had been done, the base had been poured, and I was ready to go. All I needed was some hardware and a lot of help. The time was near when it would all come together - finally.

Karen & I had a date with a Hawaii-bound airplane on January 19th. My new tower arrived on a flat-bed truck on - you guessed it - January 18th, so we hurried to off-load it with the help of a neighbor and a big tractor (the tower weighed in at over 1,200 lbs) and set it in the snow to await better weather. The antennas had arrived the month before and were still in four boxes - unassembled. Let me tell you - Hawaii is pretty good at getting me to forget most things back home, but that tower was on my mind for the next two weeks - vacation or not.

Home on February 1st, and you can remember the weather we were experiencing. No tower raising for a while, but the base had been poured in January and was ready - cold weather or not. Our concrete guy had assured me, over & over, that he had put just the right chemicals in the "mud" to assure that it finished just the same as on a hot July summer day. I was very glad I had hired a professional. The base assembly had been propped up on 2X4's before the concrete was poured and had been exactly leveled to be sure when the concrete dried, it would be perfect. Mark pointed out to me that one degree off and I would have a 'leaning' tower - something I did not want.

Now - all we needed was cooperative weather, the help of some friends, and I would be on the air in a way I had never been before.

Next month - the tower goes up.
John Hansen, KI7AR. □

New Utah Licenses For March

As of 4/1/02 there are 10010 licenses registered in Utah

It appears that license number 10000 in Utah KD7QNK was issued to William T. Wagstaff of American Fork on 3/28/02, one of 43 licenses issued to Utahns on that day. Congrats to William!

New Utah Licenses for March 2002:

AC7RP	RICHARD W WALSTER	BOUNTIFUL	EXTRA UPGRADE
AC7SE	MATTHEW P HEIL	PROVO	EXTRA UPGRADE
KD7QHQ	JEFFREY T MABEY	WOODS CROSS	NEW TECHNICIAN
KD7QHR	THOMAS E MABEY	WOODS CROSS	NEW TECHNICIAN
KD7QHS	RAINIER A SUCH	RIVERDALE	NEW TECHNICIAN
KD7QHT	JAMES D SWIFT	OGDEN	NEW TECHNICIAN
KD7QHU	PAUL E WHITE	FARMINGTON	NEW TECHNICIAN
KD7QHV	CHARLES L THAYER	LAYTON	NEW TECHNICIAN
KD7QHW	AARON R CARDON	OGDEN	NEW TECHNICIAN
KD7QHJ	BRAD HEATON	CENTERVILLE	NEW TECHNICIAN
KD7QHY	STANFORD D OKI	SALT LAKE	NEW TECHNICIAN
KD7QHZ	AARON J BURNETT	SALT LAKE CITY	NEW TECHNICIAN
KD7QIA	THOMAS F HACKINS	FARMINGTON	NEW TECHNICIAN
KD7QIB	JOHN M BURNETT	CENTERVILLE	NEW TECHNICIAN
KD7QIC	SCOTT A OGLIVIE	FARMINGTON	NEW TECHNICIAN
KD7QID	SHAWN L COVERT	NORTH SALT LAKE	NEW TECHNICIAN
KD7QIE	MARK E BERGSTROM	SUNSET	NEW TECHNICIAN
KD7QIF	JEFFREY T HOLMAN	FARMINGTON	NEW GENERAL
KD7QIG	KEITH D STEELE	CLEARFIELD	GENERAL UPGRADE
KD7QIH	RONALD A YOUNG	BOUNTIFUL	GENERAL UPGRADE
KD7QJB	ELMER G LARSEN	HYRUM	NEW TECHNICIAN
KD7QME	JEREMY R ARNOLD	PAYSON	NEW TECHNICIAN
KD7QMF	JEREMY K BAIRD	ALPINE	NEW TECHNICIAN
KD7QMG	ROY J BARLOW	MAPLETON	NEW TECHNICIAN
KD7QMH	BRADY R BIGLER	PAYSON	NEW TECHNICIAN
KD7QMI	TYLER O BRODERICK	GENOLA	NEW TECHNICIAN
KD7QMJ	JOHN C CARLSEN	PAYSON	NEW TECHNICIAN
KD7QMK	RION L CARTER	PAYSON	NEW TECHNICIAN
KD7QML	ROBERT A CONDIE	SPRINGVILLE	NEW TECHNICIAN
KD7QMM	KARL K CURTIS	PAYSON	NEW TECHNICIAN
KD7QMN	PAUL W DUNKLEY	AMERICAN FORK	NEW TECHNICIAN
KD7QMO	DEVIN J ELLSWORTH	PAYSON	NEW TECHNICIAN
KD7QMP	DANIEL J FARRA	GRENOLA	NEW TECHNICIAN
KD7QMQ	BRIAN S FIVAS	TOOELE	NEW TECHNICIAN
KD7QMR	FRANCISCO GONZALEZ	DRAPER	NEW TECHNICIAN
KD7QMS	ANDREW GROESBECK	MAPLETON	NEW TECHNICIAN
KD7QMT	SPENCER D JONES	SPRINGVILLE	NEW TECHNICIAN
KD7QMU	SCOTT J KELLY	SPRINGVILLE	NEW TECHNICIAN
KD7QMV	BLAKE W LANCE	PAYSON	NEW TECHNICIAN
KD7QMW	DEREK P LEWIS	SPANISH FORK	NEW TECHNICIAN
KD7QMX	AUSTIN J MC KINNON	PROVO	NEW TECHNICIAN
KD7QMY	NEAL O MEREDITH	ELK RIDGE	NEW TECHNICIAN
KD7QMZ	BRYCE V MORTIMER	SPRINGVILLE	NEW TECHNICIAN
KD7QNA	ANDY D PALFREYMAN	SPRINGVILLE	NEW TECHNICIAN
KD7QNB	CYNTHIA S PRIETO	SPRINGVILLE	NEW TECHNICIAN
KD7QNC	DAVID B PUGH	MAPLETON	NEW TECHNICIAN
KD7QND	APRIL D REY	SPRINGVILLE	NEW TECHNICIAN
KD7QNE	LUIS P SANDOVAL	SPRINGVILLE	NEW TECHNICIAN
KD7QNF	OWEN J SHILEY	SPRINGVILLE	NEW TECHNICIAN
KD7QNG	GEOFFREY W SIMONSEN	SPRINGVILLE	NEW TECHNICIAN
KD7QNH	BRAD J SNELSON	SPRINGVILLE	NEW TECHNICIAN
KD7QNI	JASON E STEFFEN	PAYSON	NEW TECHNICIAN
KD7QNJ	KARA S TULLIS	SPRINGVILLE	NEW TECHNICIAN
KD7QNK	WILLIAM T WAGSTAFF	AMERICAN FORK	NEW TECHNICIAN
KD7QNL	NATE E WATKINS	SPRINGVILLE	NEW TECHNICIAN
KD7QNM	BRANDON K WILSON	PAYSON	NEW TECHNICIAN
KD7QNN	ROBERTT J WOLFE	MANTI	NEW TECHNICIAN
KD7QNS	MICHAEL A BROWN	SANDY	NEW TECHNICIAN
KD7QNT	DONALD R CHADWICK	WEST VALLEY	NEW TECHNICIAN
KD7QNU	LUKAS P CHAN	SALT LAKE CITY	NEW TECHNICIAN
KD7QNV	ALEX HANSEN	SOUTH JORDAN	NEW TECHNICIAN
KD7QNW	ARMAN R PETERSON	SALT LAKE CITY	NEW TECHNICIAN
KD7QNX	DAVID B TAYLOR	SALT LAKE CITY	NEW TECHNICIAN
KD7QNY	JAMES E TUTTLE	OGDEN	NEW TECHNICIAN

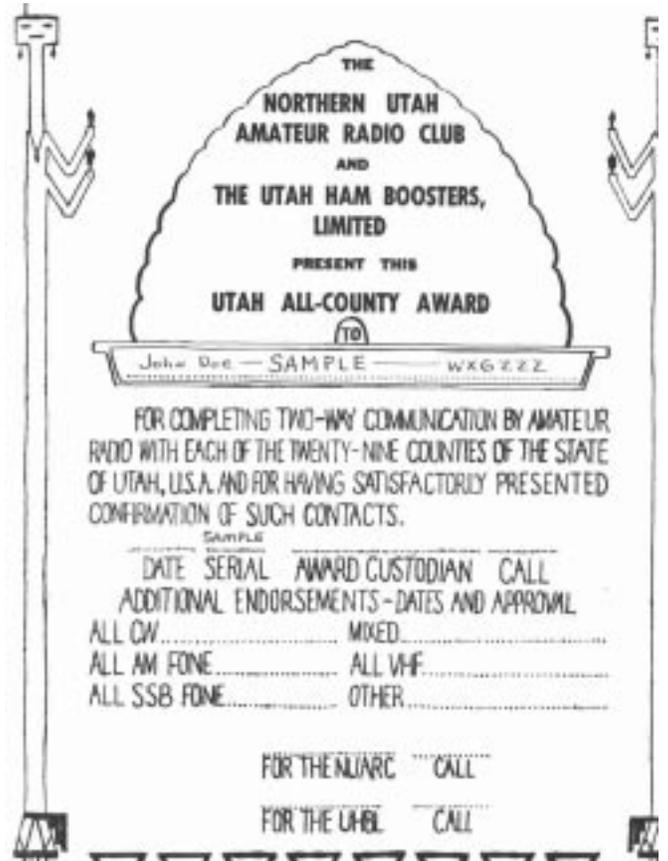
John Bingham AC7GV, compiler of this list, thanks Richard Evans N7PCE for downloading the 60 meg database from the FCC.

John Bingham AC7GV

Blast From the Past

This is a local award from the 1963 era. The letter explains that this is a Worked All Utah Counties.

Alan - N7OI



THE WORKED-ALL-UTAH-COUNTIES AWARD

This Award is presented to any Radio Amateur who can furnish written confirmation of direct two-way communication by either Amateur voice or code transmission with all of the 29 counties of the State of Utah.

This Award was originated by members of two Utah clubs, the Utah Ham Boosters, and the Northern Utah Amateur Radio Club of Brigham City.

To date only THREE Amateurs have qualified for this Award, an Amateur in Tusasap, Nev., and one each in Peoria and Chicago, Illinois. The Peoria Award holder is a young man who has spent the last 19 years in an Iron lung, and who uses Amateur Radio as a personal communication medium and for his main hobby.

The Utah Award is a difficult achievement because many of Utah's counties are sparsely occupied with Amateur operators and indeed, some of the Utah counties have no permanent residences who are Amateurs. Award seekers must therefore depend somewhat on watching for mobile Amateurs who are passing thru these counties and must succeed in talking to them while they are in the desired county.

The Utah Award has focused attention upon our State and many Amateurs in the USA and even in foreign countries are seeking to talk to our Amateurs in all 29 counties.

Inquiries concerning the Utah Award are taken care of by the Custodian of the Award, W222, at Springdale, Utah.



Utah Hamfest 2002



ARRL ROCKY MOUNTAIN DIVISION CONVENTION
July 12,13,14 2002 (Friday, Saturday & Sunday)
Ruby's Inn - Bryce, Utah (1 mile north of Bryce Canyon)

Visit <http://www.utahhamfest.org/> more details

Special Guest and Breakfast Keynote Speaker Jim Haynie, W5JBP - ARRL President

Activities Include:

- BBQ Cookout / Eyeball QSO Party
- Dutch Oven Dinner
- Breakfast Banquet
- Dealers
- Outside Swap Meet Area Free (Bring your own table)
- Seminars and Forums
- Women's and Children's Events
- Contests:
 - CW, QLF, and Homebrew
 - Mobile Installation,
 - Transformer Toss (a new method)
 - Transmitter Hunts (a new challenge)
- Prize Drawings
- Wouff Hong
- HF Special Event Station
- Amateur License Exams - Pre-Registration Required
- Contact Fred Villanueva, N7FV
(N7FV@arrl.net or Villa72@Juno.com)

Accommodations:

Ruby's Inn (Special Rates prior to June 21)
 2 Queen Beds \$70
 Pool Side \$90
 Lodge across street \$50
 Contact: **Keith** in Group Sales
Call: 1-435-834-5341 Ext. 7222
 Ask for Special Utah Hamfest Room Rates

RV/Campground:

Accommodations	For 2	For 8
Full Hookups	\$26	\$38
Electric & Water	\$23	\$35
Tent Spaces	\$15.50	\$26.50
Teepee Rental	\$23	\$35

Call: 1-435-834-5301 Fax 1-435-834-5481

Grand Prize: ICOM 706MKIIG
Pre-Registration Prize: ICOM IC-207H

Registration Information: Mel Parkes, AC7CP ac7cp@arrl.org
Before June 21st Adult (18 and over) \$7.00, Youth (17 & Under) \$3.00 **(No mail-ins after June 21, 2002)**
At the Door: Adult \$10 and Youth \$5.00

Please Print

Please provide your e-mail address so we may send you a confirmation

Name: _____ Call sign: _____ Email: _____
 Address: _____ Phone: () _____ - _____
 City: _____ State: _____ Zip+4: _____ - _____

Number of Adults:	_____	X	\$7 / \$10	= \$ _____
Number of Youth and their ages (17 & under):	_____	X	\$3 / \$5	= \$ _____
(Youth registrations eligible for youth prizes only)				
Friday BBQ Cookout / Eyeball QSO Party:	_____	X	\$6 = \$ _____	
Saturday Dutch Oven Dinner	_____	X	\$12 = \$ _____	
Sunday Breakfast Buffet:	_____	X	\$9 = \$ _____	
				Total = \$ _____

Names of Additional Attendees:

 _____ Call sign: _____
 _____ Call sign: _____
 _____ Call sign: _____
 _____ Call sign: _____

Must have names and call signs (if applicable) of all registered attendees.

Check or Money orders Payable to:

Utah Hamfest
PO Box 382
Bountiful, Utah 84011-0382