



W7TCK NEWS

Capital City Amateur Radio Club

Special ARES Issue

Helena, MT

JOHN MCDUGALL K7JM - EDITOR

APRIL 2003

From The Pres...

There is a curse - usually mistakenly attributed to the Chinese - which states "May you live in interesting times." I would have to say that we are definitely living in interesting times right now. Whether you actually see this as a blessing or as a curse probably depends to a great part on how you look at it.

I'm writing this on the evening of March 26th, after procrastinating like usual--and as a result probably trying the seemingly endless patience of our newsletter editor. The war in Iraq has been going on for just a little bit over a week at this point, with no sign of ending soon. I'm not sure anyone really knows what the long-term consequences of this action will be. All I can say is that I hope that it is over soon and doesn't cause even more interesting times for us in the longer-term.

Since the September 11th attacks, Amateur Radio has been seeing a larger and larger involvement with various Government and Law Enforcement agencies - along with involvement with

other organizations such as the Red Cross and Salvation Army. Just recently, we have been involved in the local area with providing communication support for the spring floods. During the floods, we had several operators providing communications at key locations around the valley, including the County EOC, the local Red Cross Headquarters, a couple of sandbag locations, and at least one Shelter location.

While I was working at the EOC, I received a couple of complements about how much the Amateur Community was helping them during the event. One person I was talking to expressed how much he appreciated us providing operators for the sandbag locations. Without our operators at these key locations, they would have had to utilize volunteer firemen to provide communications. By having us there, they were able to reallocate these precious human resources to a spot where their training could be put to better use. Kudos to all who helped with this operation. I'm sure that our support during this operation will

APRIL MEETING

Monday

April 7th

Salvation Army

Church

1905 Henderson

7:00 PM



Board of Directors

Pres: Forrest Christian, AC7DE

Vice Pres: John Curry, K7EBL

Sec.: Rich Weddle, KC7VVZ

Tres.: Dan Stinson, KC7KKH

News Editor: John McDougall, K7JM

Training: John Geach, KS7R

Technical: Don Heide, W7MRI

Volunteer Exam Team Leader: John Geach, KS7R

(Pres. Cont. From p1)

go along way towards ensuring we have a working relationship with the agencies we support. We have received a letter from the County thanking us for the support we rendered which will be read at the coming club meeting.

During the coming months, we will have several opportunities to help sharpen our operating skills. The first one I'd like to mention is the "Amateur Radio Emergency Communications" courses which ARRL is providing. These courses are an excellent way to be better prepared to work in an emergency situation. I would encourage everyone to strongly consider taking at least the entry level course, and possibly go onto complete all three levels. The cost is minimal and will be refunded if you successfully complete the course.

Secondly, we have two operating activities coming up. Governor's Cup is scheduled for June 7th, followed by Field Day on June 28th and 29th. Operating in both (or even one) of these activities is a good way to help practice the communication skills necessary for emergency operations. In addition, both the Governor's Cup and Field Day will be planned and operated using the "Incident Command System" or ICS, which is what is used by most government agencies during real emergencies.

Which brings us around to the program for the club meeting for this month. Because ICS has it's own "command and control" structure which many of us are not familiar with, I have asked Bob, K7HLN to provide a brief presentation on what ICS is and how we will be using it for Governor's Cup and Field Day. This is not intended to replace a full-day ICS class, but instead will hopefully provide us enough background to understand at least the basic structure of the ICS system. In addition, it is my intention to ensure that key portions of the ICS command structure for each of the two events are filled during this meeting.

As always, I welcome your comments, concerns and questions. Feel free to shoot me an email at president@w7tck.org with any club-related concerns you may have.

73's
Forrest
AC7DE

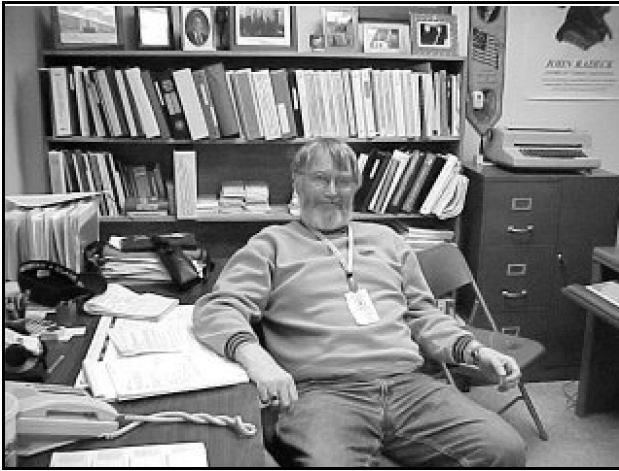


Lewis And Clark County ARES Activated

MARCH MADNESS FLOOD - 2003

ARES provided amateur radio communications during the "March Madness Flood, 2003", March 12, 13, 14. The first call came from the County DES office at 1145, Wednesday, March 12, that the county might activate the EOC in reaction to rapid snow melt and increasing temperatures. Just a week earlier we had record snowfalls and below zero temperatures, temperatures were being predicted into the 60's on that Thursday and Friday.

A phone tree was activated, with eight hams put on standby. The county declared a local emergency and activated the EOC in mid afternoon. At 1545, ARES was requested to be at the planning meeting in the County EOC. We activated the VHF radio in the EOC at 1600, using the CCARC call sign W7TCK. QST's were called to develop a list of



Our Club Vice President K7EBL (John) in the communications center at DES.

operators that might be available. ARES was assigned to Logistics within the Incident Command structure. At least one of us participated in each of the briefings during the incident.

ARES was asked to provide operators at sand bagging sites to free-up volunteer firemen. Hams handled communications and monitored three of the sand bagging sites until they were relieved by volunteer firemen as personnel became available. Hams were also dispatched to the Red Cross Shelter in East Helena and to Red Cross Headquarters. A shelter opened and was operational for several hours, but closed when no evacuees chose to stay overnight. Search and Rescue deployed their mobile Rescue Base and personnel, prepared to assist with evacuations. They indicated they might need a ham operator, but they were quickly demobilized and that operator was not needed. It was decided that the EOC would not be manned from 2230 Thursday until 0600 Friday, the 14th. Hams manned three sand bagging sites and the EOC on Friday, with others on stand by if needed. Our operations were terminated at 1745 on Friday, the 14th. Hams volunteered a total of 125 man hours and handled 150 messages.

Thirteen operators were actively involved during the incident. They were AC7DE, K7EBL, K7HLN, K7TLC, K7WES, KC7RVR, KC7VVZ, KC7ZPK, KD7BIE, KD7OQU, KD7VAF, KS7R, and N7OT. Two other hams were involved at the EOC, but not as radio operators. Chris KC7VCY was Logistics Chief on Thursday. Bill K7MT assisted the Information Technology personnel on Thursday and Friday. There are digital photos of operators in the EOC on club web page. Steve N7OT was mentioned in a story in the Helena IR.

Agencies receiving communications support were Lewis and Clark County Sheriff, County Commissioners, Rural Fire Council; County DES and American Red Cross. The Sheriff, Under-sheriff and the County Commissioners all said we can count on being called upon in the future. They expressed their appreciation and thanks to all the hams that responded.

And so do I.. 73 Bob K7HLN, ARES Emergency Coordinator

Thanks to Bill K7MT for photos from w7tck.org web page.



A letter from county officials

By the, Sheriff & Lewis and Clark County commissioners - 03/21/03

We want to thank the hundreds of people, both volunteers and paid employees, who responded to the flood disaster of March 12-14. As we have learned to expect from past disasters, there was a tremendous outpouring of work, support and resources from so many people and agencies that reduced the damage from this destructive flood.

Hundreds of volunteers responded unselfishly to help their neighbors and flood victims to sand bag homes and save property from the flood waters

that surged through the Helena Valley. The county could not have responded to this disaster without their help. It is almost impossible to acknowledge everyone, volunteers and agencies alike, but we will try:

The American Red Cross, Lewis and Clark County Sheriff's Reserve and Search and Rescue, **Capital City Amateur Radio Club**, the numerous restaurants that provided food, the Salvation Army and the media for providing information on the continuous situational changes during the flood fight.

Special thanks are in order for the extraordinary efforts of the county's rural fire departments that coordinated the distribution of sand and sand bags at seven different sites during the emergency. They filled the bags so they could be used quickly to protect property, and provided fire, emergency medical services and damage assessment in their districts despite the adverse conditions. The departments are: Baxendale, Birdseye, Canyon Creek, Canyon Ferry, Eastgate, East Helena, East Valley, Lakeside, Lewis and Clark County, Marysville, West Valley, Wolf Creek and York. Thanks to the chiefs and firefighters for their fine work.

We also had tremendous support from the Montana Department of Military Affairs, the Division of Disaster and Emergency Services and the Department of Transportation.

And of course we want to thank our county departments and employees that responded so well to this disaster: the sheriff's office, public works, disaster and emergency services, information technology and the health department. They rallied in the field and in the Emergency Operations Center to provide their valuable services.

The residents of Lewis and Clark County are fortunate to have such dedicated people and agencies willing to respond quickly and effectively



KD7OQU (Shawn) taking care of communications.



Our club president AC7DE (Forest) at the DES communications center.

when disaster strikes. We appreciate their service during difficult times and wanted to share our appreciation with our constituents.

Cheryl Liedle, sheriff

Lewis and Clark County commissioners Anita L. Varone, chairman, Michael A. Murry and Ed Tinsley

316 N. Park

From The Editor

Thanks to all of you who have contributed one way or another to the W7TCK News. Your suggestions, articles, ads, etc. have been a great help in "filling up the pages." Please, remember that as you receive this, next months copy of W7TCK News is well underway. It will be pretty much finished at least two weeks before the next meeting. With this in mind, please, get your stuff to me early or it might not fit in the next issue. If it is not time sensitive material, I keep it for a future issue. You may notice that this issue is a couple of pages larger than normal. The full report on the ARES activation has been included. The newsletter will be back to normal size next month. Thanks again for the encouragement and may God bless you all. 73, John K7JM Editor



ARES News

How do you fit in? (Continued from last month) Amateur Radio operators have been a communication resource in emergency situations ever since there has been radio. Someone once described hams as "communication commandos." To the agencies you serve, you are their immediately available communication experts. Amateurs have the equipment, the skills, and the frequencies necessary to create expedient emergency communication networks under poor conditions. They are licensed and pre-authorized for national and international communication. Hams have the ability to rapidly enlarge their communication



capacity to meet growing needs in an emergency, something commercial and public safety systems cannot do. Many of the skills are the same ones you use in everyday ham activities.

However, just having radios, frequencies, and basic radio skills is not enough. Certain emergency communication skills are very different from those you use in your daily ham radio life. Special courses, local training programs and regular emergency exercises help fill that need. Without specific emergency communication skills, you can easily become part of the problem rather than part of the solution.

As you might expect, technical and operating skills are critical. Just as important, though, is your ability to function as a team player within your own organization, and the organization you are serving. Those critical skills will also be covered in this course.

What you are not

As important as what you are, is what you are not. There are limits to your responsibilities as an emergency communicator, and it is important to know where to draw the line. You are not a "first responder." Except in rare cases of serendipity, you will seldom be first on the scene. You do not need flashing lights and sirens, gold badges, or fancy uniforms. In most cases, beyond reporting the situation to the proper authorities, hams have little usefulness as communicators at the onset of an emergency.

You have no authority. In most cases, you cannot make decisions for others, or make demands on the agency you serve or any other agency. The only decisions you can make are whether to participate or not, and those affecting your own health and safety. You cannot do it all. When the agency you are helping runs short of doctors, cooks, or traffic cops, it is not your job to fill the void. In most cases, you are not trained for it. That does mean you can lend a hand to fill an urgent need when

you are qualified to do so, or perform other jobs for the served agency of which communication is an integral part, and for which you are trained and capable.

You are not in charge. You are there to temporarily fulfill the needs of an agency whose communication system is unable to do its job. They tell you what they need, and you do your best to comply.

Edited from ARRL ARECC Level 1 Course
Bob K7HLN



Amateur Satellites

Amateur satellite are still going strong with activity on all birds. UO-14 is a very active sat as it uses 2m fm uplink and 70cm fm downlink. SO-50 and AO-27 are also FM satellites but are operational on demand basis.

I have been testing a new antenna on AO-40 for 2.4 ghz down link. So far the signals are S5 - S6 using the BBQ dish in the picture. The prime star, 4 foot dish, is getting S9 signals on 2.4 ghz for armchair copy.



Bill's (K7MT) Nice Satellite Setup

If your interested in Amateur Satellites or want to learn more about this part of the hobby, go to <http://www.amsat.org> for information.

Bill K7MT

The Rockmite

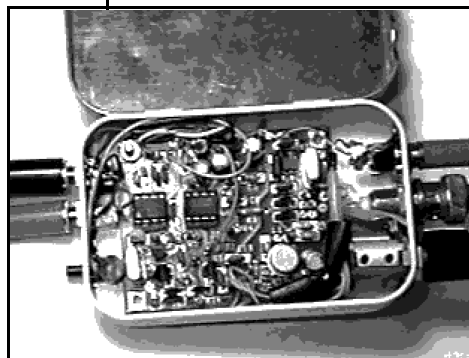
Want some fun?

- Take your HF rig,
- Strip it down to one band,
- Take away the VFO and make it only two frequencies about 700 Hz apart.
- Take away all modes except on/off keying (CW).
- Take away the final amp and reduce the power output to QRP levels,
- Reduce power some more to QRPP levels (one watt or less),
- Take away the audio amplifier,
- Take away the AGC,
- Take away all of the filters
- Take away all indicators, meters, etc.
- Reduce the size to less than that of an Altoids mint tin.

Now, that is **FUN!**

What we have left is the Rockmite QRP rig. This is a small (and I mean small!) transceiver that comes stock with an output of 400 mW (that is 400 thousandths of a watt!). It operates on only two frequencies that are only about 700 Hz apart. Notice in the above list, that we did not take technology away from the rig. The Rockmite is a tiny rig from Small Wonder Labs that has a PIC micro-controller that shifts the rockbound (crystal controlled)

frequency, operates the T/R (Transmit/Receive) functions, supplies a side-tone, and has a full fledged Iambic keyer. WOW! Notice from the above list that it is smaller than an Altoids mint tin.



K7JM's Rockmite 40

What should I mount my tiny Rockmite in?
Hmmmmm! How about that Altoids mint tin!

The Rockmite is a single board kit that does not come with an enclosure or any input/output or control devices like plugs, jacks, etc. I chose to mount mine in the famous (famous to QRPers, that is) Altoids mint tin. The Altoids tin has become a standard in the miniaturization world as an enclosure for small projects. I modified my Rockmite to put out a whopping **FULL WATT** to the antenna. I also added a small audio amplification stage and a potentiometer to control the volume to the head-set.

I wired the rig up, and as it was still clamped in the Panavise on the bench, I plugged it in hoping to hear some static in the headphones... NOTHING... Hmm. I check over the wiring and couldn't find a problem, looked at the wire to the power supply, **DISCONNECTED!** Whew, try again. I wired it back up to the power supply, turned the power on and in the headphones I hear "Sssshhhhhhhhh....." What a beautiful sound! I listened some more and I heard Dah di dah di Dah dah di dah. I nervously answered the call and had a great QSO with K6RXL/QRP from Phoenix, Arizona who was running a full gallon five watts QRP using an Electrocraft K1 rig with a G5RV antenna. I got a great RST report of 449. Wow, not quite as nervous as my very first contact years ago, but exciting non-the-less.

I listened some more. Notice that I didn't say I tuned around some more. There is nothing to tune so you just have to listen. A few minutes later I heard N3YWQ call CQ from Pennsylvania. I quickly answered his call and he gave me a terrific report of 539. I had a weak weak signal but he

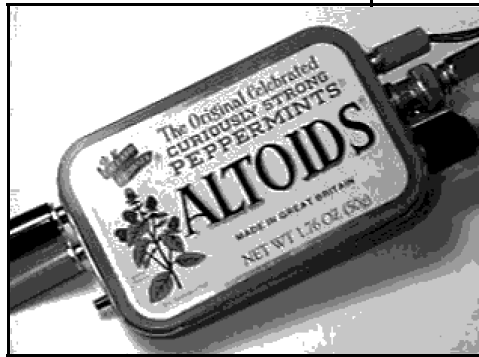
copied me fine. Then right after that, W4WDA from Ridgeway, Virginia called ME! He gave me a 549 report. Each of these contacts provided enough for the prestigious "1000 Miles Per Watt" award, as the PA station is 1669 miles away and the VA station is about 1762 miles away.

I have since worked 10 states and have worked at least 5 other Rockmites. I am in the process of making a lightweight 40 meter dipole to go with the rig that I can throw up somewhere when camping or out of doors. The rig will receive for 72 hours on a set of 8 AA Alkaline batteries and can be keyed down for a solid 9 hours straight before exhausting the batteries. The RX current consumption is about 20 mA and the TX current is about 200 mA.

So, for a fun project that will thrill you when you use it, check out the Rockmite for about 25 bucks at Small Wonder Labs fun web site at:

www.smallwonderlabs.com. They have a great group of fun looking projects for the QRP (SSB, PSK, CW) enthusiast. Listen for me on the 40 meter QRP calling frequency 7.040 MHz and if you think you might hear a faint signal in the background noise calling CQ, it just might be my little rockbound Rockmite sending its tiny signal across the Universe. Give me a call, I will be listening for you! John K7JM

P.S. I think QST stole (HI) my idea for a column about the Rock-Mite and has an EXCELLENT article in the April issue. Check it out! K7JM



My Rockmite in an Altoids tin



Have FUN

ON AIR

With HAM RADIO

The W7TCK Newsletter is published by the
Capital City Amateur Radio Club.
P.O. Box 1112
Helena, MT 59634

CCARC Web Page:
<http://www.w7tck.org>
Editors E-Mail: jdmcdougall@juno.com

CCARC Regular meetings are at 7:00 PM on the
first non-holiday Monday of each month at the
Salvation Army Church 1905 Henderson.

The CCARC Volunteer Exam Team conducts
sessions at 6:30 PM in Jan, Mar, May, Jul, Sep,
Nov, and at special times as announced.

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All expressions of opinions and all statements of
supposed facts are published on the authority of the
author and are not to be regarded as expressing the view
of CCARC

Biscuits and Gravy

**Come to Hardee's on Saturday. Every
Saturday morning between 9:30 and 11:00, as
many as twenty hams show up for
"EYEBALL QSOS.**

COME JOIN THE FUN!

NEW MONTANA SECTION MANAGER

FFLASH! NEW MONTANA SECTION MANAGER ELECTED.

Doug Dunn has won election as Montana Section
Manager. Doug is an Amateur Extra class licensee
from Livingston Montana. His new duties begin
April 1 (hope that particular day is not a forecast of
things to come). I want to personally thank Darrell
Thomas, N7KOR for his long service to Montana's
hams. Darrell has presided over the Montana
Section under some difficult circumstances.

Northwestern Division Director Greg Milnes,
W7OZ

First Class Mail