SPURIOUS EMISSIONS

Hermiston Amateur Radio Club
KC7KUG
P.O. BOX 962, Hermiston, OR 97838

March 2002

Message from the President

Hello all! The weather has been extremely moderate and I hope everyone has been able to take advantage and enjoy this fabulous weather! This should continue to improve and might make this a good time to start thinking about any outdoor projects. Do you need to adjust an antenna, put one up or take one down? Well, sound out and I will be glad to help. I cannot speak for anyone else but with 40 paid members we should be able to form a sizeable work crew for most any project provided we can sort out the scheduling logistics. So, start thinking and bring your ideas to the next meeting.

On the formal side, I have to announce the resignation of Kevin Kamlin (KB7RVS) from the position of 2nd Vice-President and all committees. Due to time constraints of his various projects, he has been prevented from allocating enough time to the office of 2nd Vice-President and the committees. He felt that his time was stretched far too thin for him to be effective in so many different places all at once. I agree and reluctantly accept his resignation, as although I love our hobby it has to take second place to family and work. So, I say thank you Kevin for all of your help. Although I still expect to see you at club meetings whenever possible!!!!!! (wink)

I shall appoint a new 2nd Vice-President once the other officers and I have met and discussed the situation. I will accept, as always, any suggestions or advice that individual club members may provide. If you have a comment or suggestion please e-mail me at kd7nfd@yahoo.com (preferred) or call me at (541) 564-6591.

It is also time to elect members to the Board of Directors. So, everyone start thinking now so we can elect and approve the new positions at our next meeting.

I would also like people to start to think about field day. I know it is still several months away but I feel it is worthy of some consideration. I am planning on having a committee setup to take charge of this and will love to have volunteers.

Speaking of committees, everyone who is interested needs to submit their ideas and comments to the respective committee. I know that your time is a very precious resource but the committee's need you're input otherwise they will do whatever they want and I will support them. The time to make comments is now before the meeting so that they can be properly addressed. Due to my position as President, I am a de-facto member of all committees and in an attempt to make things easier please contact me and I'll be sure your concern or comment is addressed. If your idea or comment is something in-depth please write it down so I don't forget it or get it confused.

Well, again I have written far too much so I'll stop boring you and preventing you from talking on the radio! By the way, let's hear you on the radio!!!! Remember, we have a weekly radio net on Monday night so come on lets hear you!

Joseph R. Melow – KD7NFD

Meeting Place

The new meeting room is finished and all that we are waiting for is the *Certificate of Occupancy* from the state. The fire department has been waiting for over a week and cannot occupy the building until the certificate is issued, so to ensure that we have a place for the meeting this month we will plan for station #2. However, if the state should issue its certification this week we could be in there for the March meeting. If there are any changes you will be notified by e-mail or listen on the repeaters for a QST. Monthly meetings are on the second Monday of each month. March 11, 2002 is the next regular monthly meeting will be at the HFD station #2 at 1930 hrs. The location of the station is at the intersections of Diagonal and Punkin Center Roads.   All amateurs are Welcome.

What's This APRS Stuff???

By Mike Bergman, N7KMJ

Ever view a spy movie where an agent places the high-tech gadget under a vehicle then with the aid of satellites in high orbit, tracts the exact location of that vehicle any where on the globe? Welcome to APRS, a new digital packet mode to amateur radio that gives hams worldwide essentially that exact same capability. That's right, anyone can track our fellow mobile APRS hams via the Internet. How's that for high-tech! More on the Internet tracking later.

APRS is short for Automatic Position Reporting System and was developed by Bob Bruninga, WB4APR. The system uses global positioning satellites (GPS) as the heart of the system. To interface or use these satellites a GPS receiver is required. Some GPS receivers are now very inexpensive and are a required "device" for use in "mobile" APRS tracking which may include auto, motorcycle, bicycle or even hikers. Home APRS stations do not require a GPS. There are many different makes and models of GPS receivers, but only those that have "data out" ports are usable for mobile APRS. Below is a photo of my Garmin GPS III+ and is more "feature rich" than is necessary but it was my choice due the display and mapping feature of the unit. Some GPS receivers are a mere bump on the dash and cost less than $100.

An Internet search using the search term "GPS" should provide one with a wealth of information on GPS receivers.

The next piece of hardware is the TNC. Less exotic and more familiar to the average digital amateur radio operator. The Kantronics KPC3 works well for APRS mobile tracking. Other TNCs may work but the KPC3 leans itself well due to its small size, features and commands specifically suited for APRS. Wiring the GPS to send data to the TNC is not difficult and wiring diagrams and how-tos are available on the web addresses listed at the end of this article. The photo below shows my KPC3 tucked between seat and console.

The last piece of equipment is of course the radio. Most any amateur radios that work for packet will work for APRS or mobile APRS. My choice of radio was a Motorola Mitrek which I re-crystalled and tuned for 144.390, one of the main national VHF frequencies for APRS. The Mitrek fits nicely under the seat and requires no control other than on and off.

Ok, enough equipment talk… what is the value of mobile APRS? My absolute most favorite use is when I am traveling to visit my family or relatives. I let them know when my departure time is then I have them do an Internet search on N7KMJ-9, which is the call sign of my mobile APRS station in my car. The Internet search returns a "whereis.htm" site that when selected, will display a map of my current position during the course of my travel. The map updates every three minutes or so. This amazes the family or relatives. In most cases, they

are able to track my location right to their driveways. Talk about an impressive introduction to amateur radio and the impact of its current capabilities!

Here on the ground, how my family is able to use the Internet to track my location is by means of many dedicated APRS digital amateur radio operators nationwide. The real secret to the system is hundreds of hilltop or wide area APRS digipeaters. They relay beacon information transmitted from my TNC containing latitude and longitude of my location received from the GPS receiver. The TNC use UI or beacon frames which is a "connectionless" mode. The hilltop or wide area APRS digipeaters relay these beacons from digipeater to digipeater. Some APRS digipeaters function as APRS gateways linking to the internet with those stations relying my location information into a web program linked to one of the internet mapping sites, thus showing my location to anyone searching my N7KMJ-9 call sign. By doing an Internet search on N7KMJ will display my home APRS station and N7KMJ-10 my APRS digipeater located on Carney Butte. If you know an APRS station call sign, the internet search works for most all "operational, on air" APRS stations worldwide… yes, worldwide.

My use of APRS is by no means the only use of the mode. Many EOCs now incorporate APRS due to the "location" rich features the mode embraces. APRS also includes a limited chat mode that allows chats between other APRS stations. Any function where "location" information is a necessity or requirement, APRS can play an important role and has worked in Search and Rescue operations. Vehicle tracking helped one ham retrieve his van after it was stolen and used in a burglary. Police were amazed this guy knew exactly where his van was and its movements. You can imagine the surprise and dismay of the burglars when the police arrived! Oh and by the way, recently Bob Bruninga, WB4APR was instrumental in getting an APRS satellite into orbit and in some modes acts as an APRS digipeater!

This is a very brief introduction into APRS. For those of you that wish further information about APRS, I've included a couple of excellent Internet website addresses below that contain a wealth of information. One site is Bob Bruninga's and the other is our very own Pacific Northwest APRS site hosted by Dave Dobbins, K7GPS and probably contains the best information for those just getting started in APRS.

Enjoy!

http://web.usna.navy.mil/~bruninga/aprs.html
http://www.nwaprs.org

HARC Breakfast

The monthly club breakfast will be at the Hermiston Eagles Lodge, Sunday March 10, at 0800 hrs. The breakfast is open to all amateurs, members, non-members and their friends. We usually have the room all to ourselves (plenty of room!) with excellent service from the staff and an excellent menu with a Sunday breakfast special.

Simplex Operation

For those of you that are interested in operating simplex or are out of range of a repeater, the following articles may be of interest. Locally there are many amateurs that choose to operate simplex quite successfully as well as there is very active group to the North of us that can be heard on Wednesday evenings on 146.52Mhz., simplex. Try it and you might be surprised!

WILDERNESS PROTOCOL

Mutual Assistance Procedures for VHF/UHF FM Overview for ARRL Repeater Directory
By: Paul Newland AD7I
ad7i@tapr.org

This is the Wilderness Protocol Portion of his Overview.

The Wilderness Protocol is a suggestion that those outside of repeater range should monitor standard simplex channels at specific times in case others have priority calls. The primary frequency is 146.52 Mhz., with 52,525, 223.5 446.0 and 1294.5 Mhz. serving as secondary frequencies. This system was conceived to facilitate communications between hams that were hiking or backpacking in uninhabited areas outside repeater range. However, the Wilderness Protocol should not be viewed as something just for hikers, it can,(and should) be used by everyone anywhere repeater coverage becomes unavailable. The protocol only becomes effective when many people use it.

The Wilderness Protocol recommends that those stations able to do so should monitor the primary (and secondary, if possible) frequency every three hours starting at 7 AM local time, for 5 minutes (0700-0705 AM, 1000-1005 AM....,1000-1005 PM). Additionally, those stations that have

sufficient power resources should monitor for 5 minutes starting at the top of every hour, or even continuously.

Priority transmissions should begin with the LiTZ signal. CQ-like calls (to see who is out there) should not take place until four minutes after the hour. For more information on the Wilderness Protocol, refer to QST (Feb 94, page 100; Apr 94, page 109; May 9 pages (103-104).

LiTZ Overview
Mutual assistance procedures for VHF/UHF FM
Overview by: Paul Newland, AD7I, for ARRL Repeater Directory

INTRODUCTION
One of the great features of Amateur Radio is that it gives Hams the ability to provide mutual assistance to one another. There are two common procedures currently in place for mutual assistance on UHF/VHF FM frequencies. The first is "LiTZ" a DTMF (touch-tone) based all call priority alerting system. The second is the "Wilderness Protocol" LiTZ (i-added to make it easier to pronounce). LiTZ is a simple method to indicate to others on a UHF/VHF FM radio channel that you have an immediate need to communicate with someone, anyone, regarding a priority, situation or condition. Litz stands for, Long Term Zero. The LiTZ signal consists of, transmitting DTMF (touch tone) Zero, for at least 3 seconds. After sending the LiTZ signal the operator announces by voice the kind of assistance that is needed. For example, (5 seconds-DTMF- ZERO, "This is KA7BCD, I am on interstate 5 between mileposts 154-155. There's a 3-car accident n the southbound lane. Traffic has been completely blocked. It looks like paramedics will be needed for victims. Please respond if you can contact authorities for help. This is KA7BCD."

If your situation does not involve safety of life or property, try giving a general voice call before using LiTZ. Use LiTZ only when your call goes unanswered or the people who respond can't help you.

When you see the notation, "LiTZ" for a repeater in this directory that means that it is highly likely that someone will hear and respond to LiTZ signals transmitted on the input frequency of the repeater. Please note however, if a CTCSS tone is needed to access the repeater you should transmit that CTCSS tone along with the LiTZ signal.

The type and nature of calls that justify the use of LiTZ may vary from repeater to repeater, just as other uses vary. Here are some general guidelines that may be suitable for most repeater and simplex calling channels. Items with a star (*) should be acceptable on any frequency at any time.

LiTZ USE GUIDELINES

Event/Situation	WAKING HOURS (0700-2200LT)	SLEEPING HOURS (2200-0700LT)
Calling CQ	no	no
Calling a Buddy	no	no
Weekly Test of LiTZ	yes	no
Club Message	yes	no
Need Driving Directions	yes	no
Report Drunk Driver	yes*	yes*
Car Breakdown	yes*	yes*
Safety of Life or Property	yes*	yes*

For more information on LiTZ and LiTZ decoders, refer to QST (Oct 92 Page 82; Nov 92 pages 108- 110; Dec 95 pages 25-31).

Club Net
The HARC nets are on Monday evenings at 1930 hrs. The nets are conducted on the KC7KUG repeaters on a shared basis with the Pendleton Amateur Radio Club and are open to all amateurs. The HARC repeater frequencies are 147.020 +, 147.160 +, 449.325 -. These repeaters are linked together on Monday evenings for the nets to provide a wide coverage area for the amateurs in Umatilla and Morrow Counties as well as Southeastern Washington.

ARRL Membership
ARRL membership applications are available through the club for new subscriptions and renewals. If you are subscribing for the first time or have been absent from the ARRL for more than two years, the club can benefit from your subscription. Talk to the club secretary for information and ask for an ARRL subscription application.

ARES / RACES
For information about ARES/RACES and UMESRO talk to Gary Cooper, N7ZHG, EC – DEC for Umatilla and Morrow Counties. Gary can be found on the 146.780 - repeater. UMESRO nets are on Thursday evenings at 1930 hrs on the 146.780 – repeater.

FOR $ALE – WANTED

Radios for Sale   Mike Gemelke - N7NKT

KX-P1624 PRINTER - BEST PRICE

RCI-2950 MOBILE   KENWOOD
10 MTR. MOBILE   TR-7950 MOBILE
ALL MODE $ 110.00
BEST PRICE

AZDEN MOBILE   IBM LAPTOP COMPUTER
PCS-3000 2 MTR.   810 MG. HARD DRIVE
MOBILE   CARRYING CASE FOR
    COMPUTER and
$ 80.00   SMALL PRINTER

 ICOM Handheld   MAGELLEN GPS 2000 XL
420 - 450 MHZ.   WITH CARRYING CASE
    and User Manual
IC- F40 LT   With Comprehensive Guide
Prog Software book   to Land Navigation
Plus Cable / $200 $110

Committees

At this time, we have three working committees (repeater committee, by-laws committee and web page committee) and they are interested in membership feedback.   These committees are working for you, the membership, and to make the HARC an active and successful club. Talk to our committee volunteers and voice your ideas or concerns. These people would like to hear from you.

As our activity season draws near, I am sure you will see more committees; field day, parades, the county fair to name some of the events. Let's volunteer to participate and help our club.

DON'T FORGET

To check the expiration date of your license,
To update the info on your license to the FCC,
HARC Breakfast – Sunday March 10, 2002
HARC Regular meeting – Monday March 11,2002,
HARC Monday evening net – 147.020+, 147.160+, 449.325-

If you have something of interest and would like to share it with others send it to the club post office box and we will print it. For Sale-Wants? Send them in also. Have Questions?? Somebody has the answers! Need club or ARRL membership forms? We have them.

See you at Breakfast or the Meeting, talk to you on the Net or on one of the club repeaters.

73   Phil KC7KI