PREZ SEZ:

The Holidays are now behind us and we can focus on the impending **Contest**. We trust all of your holidays have been filled with laughter, joy and family. Claire and I had our entire family over two times during this season and it was indeed a wonderful time. We have much to be thankful for in this land, which is still the land of opportunity.

The December meeting was outstanding with much discussion regarding strategy; we look forward to continuing the discussion at our **next meeting which is just 43 hours before the start of the Contest**. You won't want to miss this contest conversation that includes all the final details of how we will be increasing our score. I am still open to receiving any documents that have been created regarding contest strategy to be incorporated into the current document that will be delivered at the upcoming meeting.

Are all of your preparations continuing for the contest? I had to fix an issue with 432 at the top of the tower, something I wish was not needed, but had to be done. I know Paul, WA3GFZ is still planning on installing 8 bands where nothing existed only a month ago, ambitious to say the least. **Some problems will show themselves at the last minute for sure**; it's a way of life with systems as complex as we maintain.

You can't get far from the new year without spending a little time assessing the year past, and looking forward to the year ahead. The saddest part of last year was losing one of our members and two others from the community. We were successful with contests throughout the year and have enjoyed some great meetings. There are lots of great events planned for this year, 2013. Apart from contests, the next major event is the annual Ladies Night Gala which will occur on March 16th. Be sure you calendar is free that evening. The invitations will be going out soon and flyers will be available at the next meeting. We also have another great conference planned for the end of September, which will include the replacement for Hamarama on the Sunday of the conference. April's meeting will be "ARRL Night" with the League Contest Chief coming for a visit. So all in all we have lots to look forward to this year, let's make it one of the best.

On to the Contest at our doorstep. I'd like to make this contest a fun one. Lets all see how respectful we can be on the air. Show your spirit to everyone you work. We all agreed at the last meeting that a primary goal will be to pause / hesitate before rapidly QSYing from the frequency you are working. Give others a chance to "tail end" your contacts. **Lets see how many more contacts that yields**.

The next Constitutional Objective I'd like to highlight is number (3) "To assist in every honorable way the desires of our fellow club members to secure better and more reliable radio communication and test equipment." The first thought that I get from that objective is that members need to "desire" better and more reliable radio communications. When you have a need to improve your station, it is incumbent on you to make your request known. As you have heard from Bill (EGE) and Rick (DS), we have a list of equipment available for the contest. Our club has always been one that makes this objective come to life. I remember an early meeting where AA2UK was handing out amplifiers. Bill was a great contributor to my early station, more in sound advice than equipment. I follow that advice to this day. When the requests are known there are many valuable resources within the club to fulfill the objective to secure better communications and test equipment.
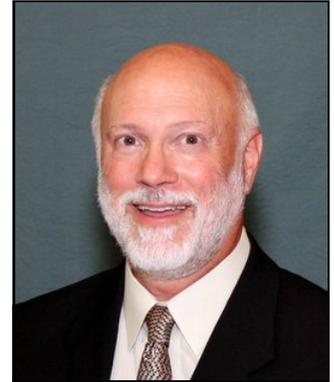
On with the new year; it's here if we are ready or not. Lets all enjoy it the best we can.

And lets work on lots of bands,

Phil K3TUF

"What's all this Multiple Bandscope Stuff, Anyhow?"
(Part 2)

By Roger Rehr, W3SZ

There are other advantages to using the bandscope on the microwave bands, besides the ability to see all possible liaison or fallback frequencies simultaneously at all times. On the microwaves, having a bandscope allows you to reduce the number of variables when looking for a station: if he is anywhere within about 180 kHz, you will see him; so you can look for likely signals on the bandscope and rotate the array to try to peak them without having to solve both the frequency and heading variables at the same time. Ordinarily, when you are trying to find a weak station on one of the microwave bands, you need to worry about three variables: frequency, time, and beam heading. With a bandscope, you see all the frequencies all of the time, so that the only variable that remains is beam heading. This makes a huge difference and greatly increases the chances of your finding the weak station, and greatly reduces the time that it takes to do so. Also, with the bandscope waterfall, you can see signals that are too weak to hear or work. So on the microwaves you can find a very weak signal and then peak the heading with the bandscope and turn it into a usable signal and complete the weak signal contact, when you never would have even been aware of the signal without the bandscope. You do this by finding the station with the bandscope, peaking its signal by optimizing your beam heading, and then transmitting to the station on his frequency so that all HE has to worry about is beam heading. More often than not, what was a barely visible, non-workable signal becomes a signal that is Q5 at both ends when this procedure is followed. So you can make contacts that would not have been possible without the bandscope.

 Furthermore, because you don't need to hunt for the other station as you are running the bands, you can move very quickly from band to band. I have run all the bands from 50 MHz thru 24 GHz in 5 minutes. This increase in efficiency is very important during a contest.

 Additionally, you can tell if something in your system "breaks" on a band other than the one you are operating on at the time the problem arises, rather than discovering this problem later on when you are running the bands. You can do this by seeing a loss of signals and / or a drop in the noise floor on the bandscope for the band that has developed a problem. This is visible even while you are operating on another band. Having this knowledge in advance reduces the chances of a run up the bands ending prematurely because of your finding yourself in a black hole when you arrive on a band. If there is a problem, no signal is heard, and the other station decides it's not worth trying the higher bands. You can avoid the problem band, or at least forewarn the other station of a potential problem, and then continue up the bands whether or not you are successful on the "problem band".

 So the first major point of this paper that I wanted to convince you of is that you gain a big advantage by having a bandscope. Having convinced you of that, the second major point that I wanted you to understand is that you gain a tremendous advantage by having **simultaneous bandscopes on multiple bands**.

 Now that you believe both of these points, I want to introduce the third and most important major point of this paper: **the radio must be the bandscope**. I know this because over a period of several

years, ending several years ago, I tried it the other way. I had bandscopes on the lower four bands and one for the microwaves, using as my hardware for this purpose a variety of SoftRocks, an SDR-14, and later some SDR-IQs thrown in too. The delays caused by having to switch my focus from the radio to the bandscope and then back to the radio really added up over the course of a contest. Also, although I tried to streamline things by writing software so that I could click on a signal on any bandscope's waterfall and then type a computer key to have that frequency sent to my IF radio, I still needed to make sure my station was on the correct band and that it was on the bandscope's band. I also had to make sure that I was logging on the correct band each time I changed bands. During the course of a contest, that necessity left room for a lot of errors to occur, and resulted in a significant amount of wasted time.

 Although operating this way gave me major advantages over the situation of <u>not</u> having the multiple bandscopes, it was still not ideal.

 So I set my goals as follows:

 To have constant bandscope monitoring of each of the bands 50, 144, 222, 432, and 1296 MHz, and a shared bandscope for the remaining bands thru 24 GHz.

 To be able to select a band by simply clicking on its GUI or typing its frequency into N1MM. To have everything automatically switched so that I could immediately operate on that band, with no need for ANY manual bandswitching of anything. And also to have N1MM always tracking the frequency / mode in use and logging appropriately.

 To have the bandscope BE the radio, so I didn't need to transfer band / signal information from the bandscope to the operating rig. After clicking on the signal all I would need to do to make the contact would be to step on the foot switch and communicate. Using this method, I wouldn't have to worry about having the correct radio, the correct Mic, the correct CW key, or the correct footswitch. Similarly, I wouldn't have to worry about pushing any buttons or grabbing the correct headphones to hear the receive audio for the appropriate band. **All of this would be taken care of automatically**.

 I have very much enjoyed using a station which meets all of the above goals for the past 2-3 years, and will describe how it does its job. More specifically, I'll describe the design criteria that allowed me to achieve the above goals. These criteria are listed below:

- The bandscope is the radio - both Tx and Rx.

- Always-on bandscopes are used for the lower bands: 50, 144, 222, 432 MHz and for 1296 MHz. A shared bandscope is used for 903 MHz and 2.3, 3, 5, 10, and 24 GHz.

- Automatic band selection by clicking on the appropriate band/radio GUI or typing the correct frequency into N1MM

- Automatic switching of microphone, footswitch, receive audio, key/keyer to the appropriate radio for the band desired

- Ability to manually set the assignment of each of the above I/O devices (footswitch,

receive audio, key/keyer) to a given radio if desired [to supplement or over-ride the automatic assignments for particular situations]

- "Extra" footswitch and receive audio channels to facilitate microwave liaison.
- All radios are seen by logging program as one radio
- Full integration of the radios and N1MM.
- When a band is selected using N1MM, the appropriate radio is selected and all automatic switching performed
- When a band is selected by clicking on appropriate radio's GUI, N1MM is set to that radio's frequency and all automatic switching is performed
- Voice-Keying and CW Keying from N1MM are implemented and automatically connected with the appropriate radio
- Frequency can be changed by [1] clicking on the bandscope, [2] typing the frequency into N1MM, [3] dialing the ShuttlePro2 knob, [4] using the Up/Down arrows on the computer, [5] typing the frequency into the PowerSDR VFO window
- Software lockout is provided so that radio cannot switch bands while transmitting, and the radio cannot transmit while switching bands.

This is what the station looks like to the operator. The picture shows 3 computer screens:
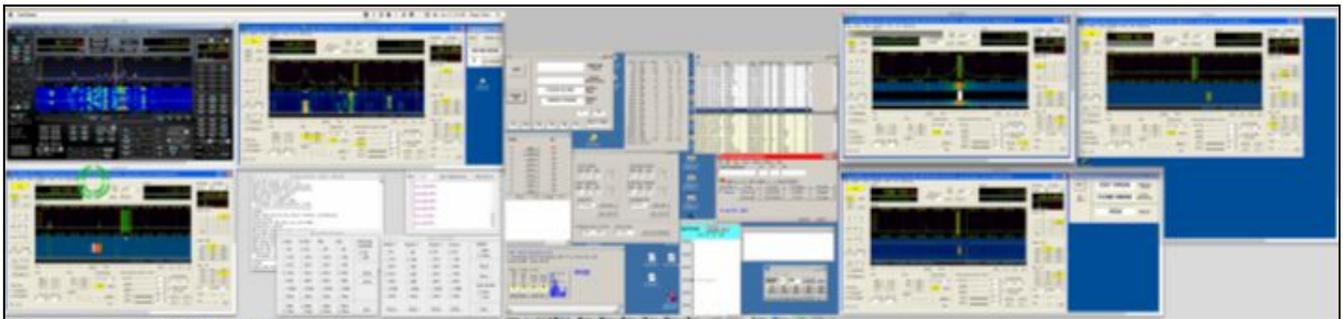
On the left, radios for 50 and 144 MHz are on top, and 222 is below. Below the 144 MHz radio are the GUIs for configuring the automatic switching of the footswitches, Mic, Key, and receive audio. In the center is the N1MM logging computer. On the right are the radios for 432 MHz and the Microwave bands on top, and 1296 MHz on the bottom.

This block diagram shows the system design (further discussion is on the next pages):
A dual quad-core Mac Pro with its associated dual Apple LED Cinema Displays is the control center and aggregator for all of the radio GUIs. Six instances of PowerSDR are controlled from its screen, keyboard, and mouse via individual javaVNC connections to six individual computers, each connected to an SDR running PowerSDR and a VNC server. This portion of the system is highlighted in green on the diagram on the next page.

The Mac Pro also controls, via 2 USB ports, a homebrew hardware switcher which automatically assigns microphone, footswitch, receive audio, key/keyer to the appropriate radio for the band desired. When a particular PowerSDR GUI is clicked, the Mac Pro sets the focus to that GUI (with its associated radio and instance of PowerSDR), and automatically switches the microphone, footswitch, receive audio, and key/keyer to that radio. This is done with two programs that I wrote that run on the Mac Pro, "Radio Manager" and "Audio Controller". Each is written in

Cocoa/Applescript, and I have placed the code that I wrote for them on my website.

The Mac Pro also sends, via Radio Manager, band and exact frequency information to the logging computer and N1MM, so that the contact can be logged appropriately. In addition, the Mac Pro receives, via "TCP Server", band information from N1MM and uses it to control switching of the microphone, footswitch, receive audio, and key/keyer when band/frequency selection is made from N1MM. Its also used to give focus to the appropriate radio/GUI when frequency selection is made from N1MM. TCP Server is a program that runs on the Mac Pro that I wrote in Objective C using the XCode environment. The Radio Manager functions described in the preceding two paragraphs are highlighted in green on the illustration below:

The Audio Manager is similar to the Radio Manager in that it also controls the homebrew hardware switcher, but its

function is much more limited; it only functions to direct the received audio from the appropriate
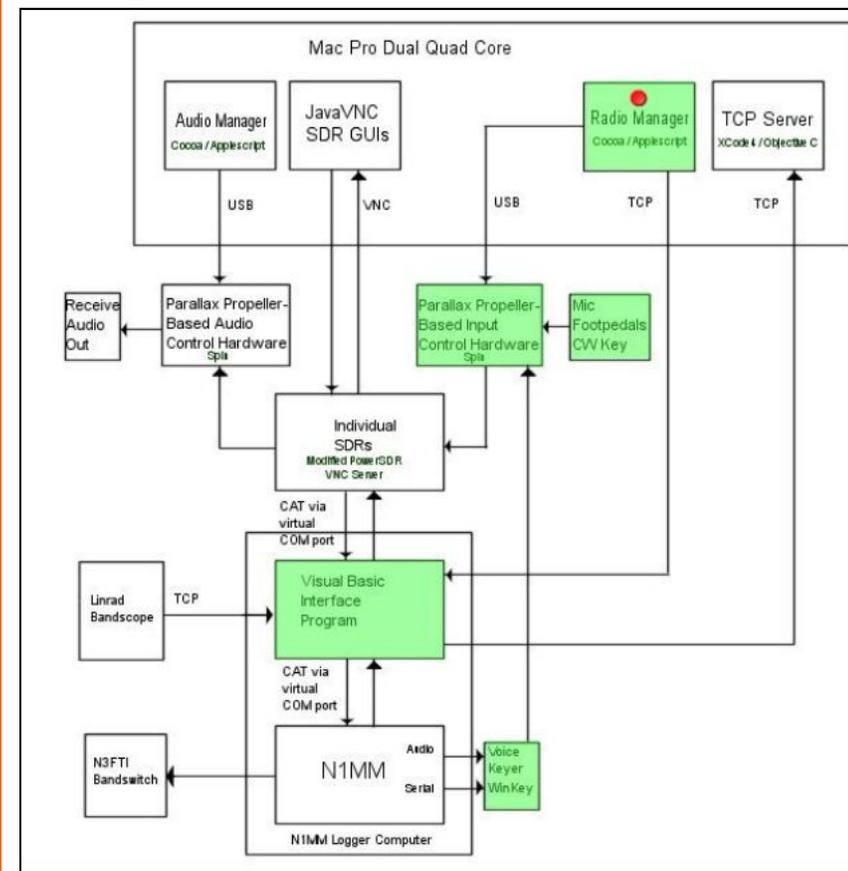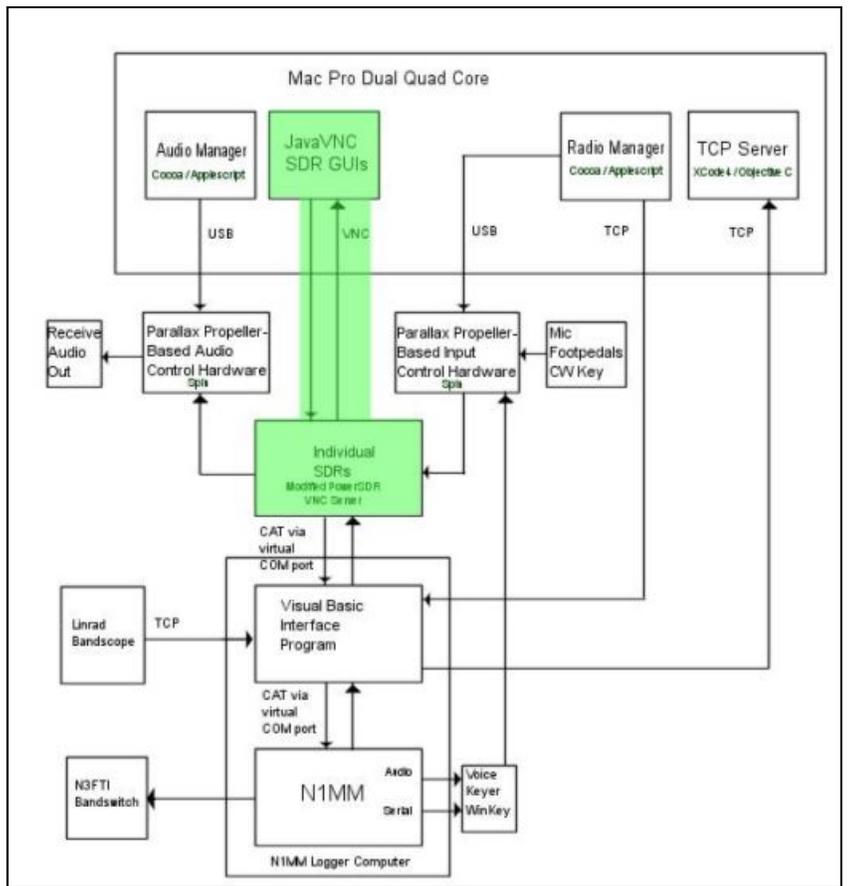

radios to speakers, headphones, or computer for the digital modes. It allows automatic or manual switching. Its place in the system is highlighted in green in the diagram on the next page.

Thus one can at any time select a radio/band and frequency from either the GUIs on the Mac Pro **or** from N1MM. **Any change or selection made at one location will be accepted by the other**. For the operator, things function as if there is one 11 band radio with multiple bandscopes coupled to N1MM by CAT control, with logging and all switching functions automatically controlled.

The Radio Manager and Audio Controller applications on the Mac Pro allow one to customize the automatic switching of input/output devices. This is useful, as the needs are different when one is on the low bands vs. when one is

on the microwaves (keeping both the primary and liaison channels open simultaneously). Here are the GUIs for these applications:

When on the microwaves, one footswitch and the microphone can be assigned to the liaison band, and the other footswitch and the key assigned to
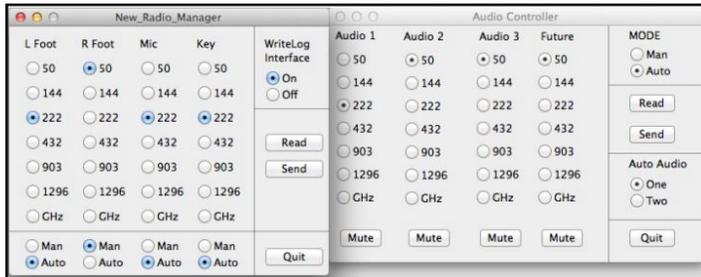
the microwave band, or vice versa, and a separate receive audio channel dedicated to each band!

MORE NEXT MONTH!

Audio Manager
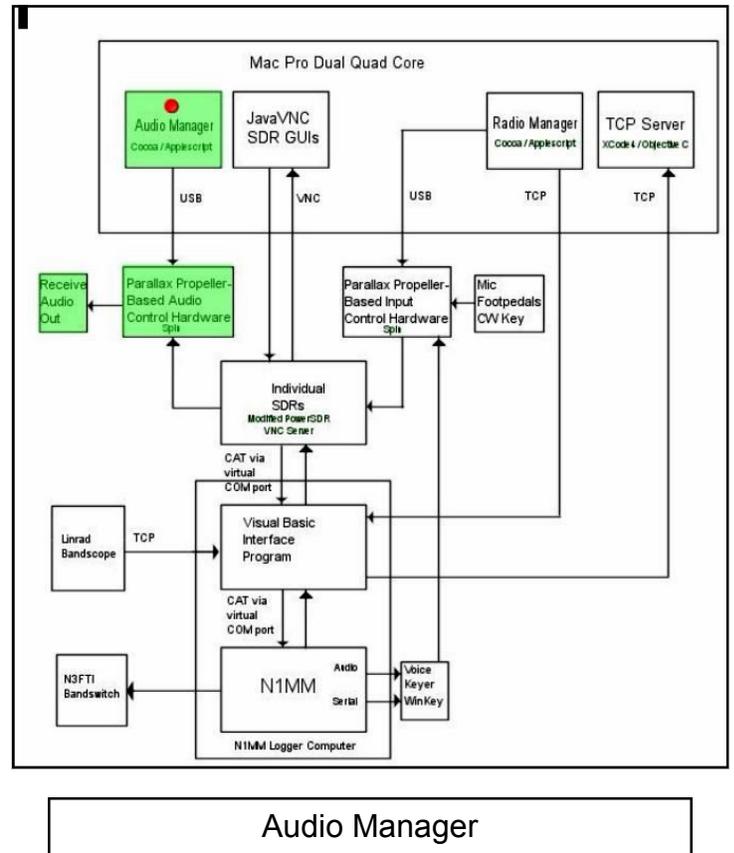
Smel A. Rhat's Contest Speculations

1. What do KB1JEY and K3TUF have in common? *

2. Can WA3GFZ beat the clock and get those antennas up on his new tower before the January Contest?

3. Can KB1JEY get his microwave transverters, feedlines and antennas together before the January Contest?

4. Can K3JJZ have his microwave bands in order for January?

5. Will WA3SRU get his bent mast straightened before the January Contest?

6. Will the newest VHF station at the Ben Wilson Center make a contribution to the January club total score?

Stay tuned for the answers to these vexing issues.

*Correctable feedline problems on 432

Pix from December Meeting

Congrats to **Bob Fox** 50 Years a Packrat

Chris doing a presentation on his 6M DXpedition (and mission) to St. Louis du Nord in HH land

Welcome to newest Packrat Jerome K3GNC
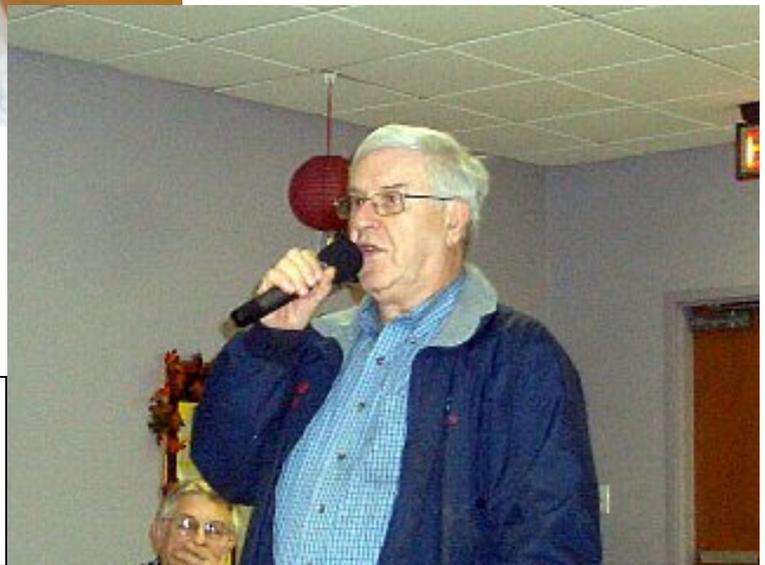
Bill providing the latest info on the upcoming January Test

Six Meter DX Report

December 2012

   I'm writing this as I watch the Geminids meteor shower on the P3 panadapter for my K3. It is neat to watch as well as hear signals. Six is hopping with a lot of CW meteor scatter signals from 700-1000 miles away. The peak of the shower is tonight, and it's nice to hear meteor scatter being worked on CW and SSB.

In general six meters has been dead here. Cycle 24 has been disappointing, and it does not look like there will be much, if any F2. See the Cycle 23 Graph.
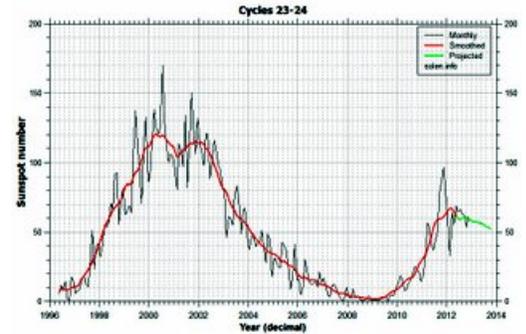
Even with the poor conditions there have been occasional openings. On Saturday evening, December 8th there was a very strong opening from New Zealand to the West Coast. The next evening, Sunday December 9th, ZL1RS worked into the midwest and northeastern U.S., including Pennsylvania. I was working upstairs and shortly after 8:00pm (01:00UTC Monday),and turned on my wife's laptop. Out of curiosity I checked ON4KST chat. I saw the telltale red lines and ran downstairs. See map for below. I saw that Dave NZ3M in Elizabethtown had worked Bob ZL1RS about 20 minutes earlier, and other stations in the northeastern US were still hearing him. I turned on the amp and listened for Bob. He was in a fade which is characteristic of this type of opening. Just after the amp cycled on I heard Bob's weak cw CQ and answered frantically. He was fading and I could not make out enough to tell if he was calling me. I listened intently but never heard him again. After the opening faded Bob got on the chat page and confirmed that he had heard me. Dave NZ3M had also called and left a message on my cell, which of course was turned off. This was the second time I had heard ZL and I was frustrated again. I know how Randy WA3HLP felt after missing E51 a couple months ago.

ZL
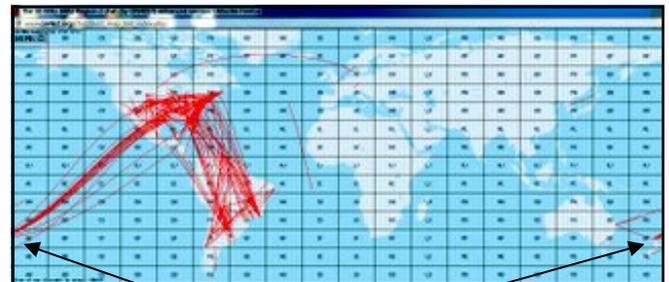
Other stations in the area that worked ZL included AK3E in FM19, and K3OO in FN20. The footprint for the opening in ZL was very narrow. Both Rod ZL3NW, and Kerry ZL2TPY were monitoring the opening and heard nothing from the U.S.

While this was going on there was some north-south propagation.   K2MUB (FN21), KB3RHR (EN90), K1TOL (FN44), and WZ8D worked LU5FF around the same time.

It seems that the ZL opening was F2 or TEP extended by sporadic E to this area, and the opening to LU was TEP extended by E. Interesting, we are approaching the peak of summer sporadic E season in the southern hemisphere, and the peak of our winter season. Openings like this do occur and it pays to monitor the band between 23:00 and 02:00UTC for these types of openings. They don't happen often, but when they do they are thrilling.

 73, Chris W3CMP

Microwave Update 2013 News

By Jeff Kruth, WA3ZKR 2013 Conference Chairman

After a wonderful MUD 2012 conference in Santa Clara, it is time to think a bit and start planning for MUD 2013, to be held at the Space Science Center of the Morehead State University, in Morehead KY.

First, let me say that this year's conference was great. I have attended many MUD's (not as many as some, but more than a couple), and this year's was extremely professionally done and a lot of fun. Quite a target for me to have to hit!

However, I consider myself lucky in that so many have offered to help out. I would like to marshal the forces and plan the time line a bit, as I know the days and months slip by fast!!!

Here is what I recently committed to paper and some thoughts: Date has been set with the University for October 18 & 19, 2013 for the conference proper. The only caveat is I am going to keep checking with them to ensure that they do not (re-)schedule homecoming weekend then. As of now, homecoming is the following weekend.

Only concern is the campus clogging up, but the powers that be seem to feel we could handle it, if that should happen for some reason.

So here is a tentative schedule:

Thursday Oct. 17: For early arrivals, there will be a (no-cost, my way of saying thanks for coming) get- together picnic "Meet, eat & greet" at WA3ZKR's QTH as there is no opportunity for a "surplus tour" in Morehead!

Start 2 PM goes until 8 PM or whenever the fun runs out.... Friday Oct.18: Conference in the Space Science Center begins, runs till 5 PM, swap meet in the evening, either at the school, OR (as we did for the SVHFS conference) at the main hotel, in a conference room.

Saturday Oct. 19: Conference continues. Presentations end at 5 PM, with Banquet at 7 PM.

Sun Oct 20: Free Hamfest in parking lot at Space Science Center (Tentative; will try to arrange for people to come in from surrounding states, see what happens!!)

We will attempt to conduct this one as all the others have been, with labs happy to have Kent, WA5VJB, running the Antenna Range, no better guy for this job!

We have the main Star Theater for the primary presentations, and also have auxiliary classrooms as well if someone wants to do a workshop or something.

N2CEI has graciously agreed to put together the Conference Proceedings, I roped KB8VAO into the prize table effort, and have called upon WA8RJF to act as the master of ceremonies (introduce conference speakers, etc.) freeing me to put out the inevitable fires that will arise. We will do tours of the 21 M, control room, clean room, anechoic chamber, labs, etc. at times throughout the conference. I have students to call upon for this and will have a shuttle bus to take people to the dish site.

We have two automated "ham type" satellite tracking stations that can be used as well, should there be an interesting bird making a pass. There is a chance that the 21 meter dish will be configured by then for 432 MHz operation and we may have the chance for 432 moonbounce operation during the conference (will look at moon times, etc and keep interested parties apprised).

We have approximately 12 hams here in the Space Science Center, who will help out, plus I have an excellent support structure here at the University.

Morehead State is excited about having this conference and, I am sure, based on past performance, will help me out greatly!!

Closest airports are Lexington KY, 1 hour to west, Huntington WVA, 1-1/4 hour to east. Big airports at Cincinnati OH, approx 2-1/2 hours Northwest as is Louisville KY, for those who have friends there and want to visit, etc.

I was asked about transport to and from the hotels. We tried this for the SVHS conference we had here in 2010. I set up a bus for morning and evening runs, 3 times in AM and likewise in PM. There were no takers! We had about 80 people then. It was so easy to drive back and forth (2 miles or so) and park at the school that no one bothered with the bus. I cancelled it after the first day.

If those who have spoken to me already about helping out would send me an email, I will put together an email list for the conference. If there are any hams in the area (hint, hint MVUS guys...) that want to join in and help out some, I would appreciate it.

For those who have not heard me drone on about Morehead and what we are doing here, look at the web site for Morehead State University and follow the links to the Space Science Center (_http://www.moreheadstate.edu/ssc/). We have a lot going on, from Radio Astronomy and satellite mission operations with a $3 Million 21 meter dish, to building and launching cubesats, along with a great facility to teach and train new generations of America's engineers and scientists! I appreciate your comments, criticisms and suggestions.

Follow-Up to the November "Fall Fixup at KB1JEY"

Some of my fellow Packrats might have been a little disturbed at the picture in the last issue of Cheesebits showing a frayed wire rope end. Rest easy, the frayed end was due to some carelessness on my part and not to a catastrophic failure of the wire rope. The wire rope had been cut to a length shorter than required for its purpose. My gaze was so fixed on the tower as it was being lowered that I did not notice that the safety turns were unwrapped from the winch. Hence, the end of the wire rope pulled out from where it was attached to the winch's spool. No aluminum "antlers" or Packrats were injured as the tower dropped a few inches onto a waiting sawhorse.

George KA3WXV and I successfully reattached the wire rope to the winch spool and cranked the tower back up to vertical. However, it was clear that the time had come to replace this piece of wire rope with one of the correct length. Besides eliminating the possibility of a repeat accident, a longer piece of rope allows attachment of the winch's hook to a higher point on the tower, increasing the mechanical advantage of the winch.

For even extra protection, I had a button crimped on the end of the replacement wire rope that attaches to the winch spool. The picture that I have supplied to Cheese Bits shows the extra wire rope on the spool and the button on the end of the rope.

During George's return visit to my QTH, he helped me attend to another problem. One of the branches of the tulip tree adjacent to my tower had grown a new branch that was beginning to interfere with the operation of my tower. At about 45-50 feet high, it was beyond the height of my ladders and pole saws.

We shot a rope over the branch and pulled up an inexpensive chain saw [a piece of chain with saw blades and poly rope attached to each end]. After a time, it became obvious that a better quality saw was required. George and I adjourned to the local hardware store where we purchased a "High Limb Chain Saw" manufactured by Green Mountain Products. The one we purchased had a 24" blade that looked a lot more like an electric or gas chainsaw blade. Green Mountain Products sells a 48" blade version.

The problem with using this kind of saw is that only one side of the blade cuts. The saw has a weight that is supposed to position the cutting side to the bottom. In practice, this is a bit tricky to control but eventually, George and I were able to position the saw correctly and the offending branch was history. Just look at the picture of George smiling and holding the branch we successfully cut way above our heads in the photo.

As a safely reminder, trees are largely composed of water and branches are much heavier than you might imagine as you view them way above your head. So **always stand to the side** of any branch that you are sawing and treat them with respect as they break and fall (or you may break and fall). **73, Michael "Nuvistor" Davis KB1JEY**

Lunar-Link Systems is acquired by Louis Parascondola W1QJ & Steve Simons W1SMS

Danbury, Connecticut - October 17, 2012 - The Lunar-Link amplifier business has been acquired from the estate of the late Steve Powlishen; K1FO.

According to Steve Simons; W1SMS, the business will immediately be know as "Lunar-Link International". We are looking forward to expanding the company's global market footprint.

Lunar-Link International will offer the same high quality legal limit output VHF / UHF linear amplifiers, accessories, technical support, repairs and, replacement parts as in the past. Customer service has always been a priority and we look forward to continuing these values.

Lou, W1QJ states that new product orders will be accepted now with deliveries starting in the first quarter of 2013.

Lunar-Link International manufacturers high power VHF and UHF linear amplifiers and accessories for use by amateur radio stations in demanding weak signal applications including EME, contesting and, digital modes.

73,
Steven M. Simons
W1SMS

SVHFS Conference Announcement

The 2013 Southeastern VHF Society conference, sponsored by the Florida Weak Signal Society, will be held April 19 & 20, 2013 at the Hilton Cocoa Beach Oceanfront, 1550 N. Atlantic Ave, Cocoa Beach, FL.

We have a full slate of events including, a surplus tour, antenna range, noise figure testing, Friday luncheon with WB4SLM and Friday night flea market. There will be vendor displays and technical presentations both days. The Saturday night banquet will have awards for the best paper and the best presentation, the K4UHF and Runkle honors and presentation of the Fall Sprint winners.

For attendees, there will be a shack photo contest to be judged by the XYLs. Prizes for the best and worst.

See the SVHFS web site http://www.svhfs.org or contact Chuck Hoover, 1945 E Phillips Ct. Merritt Island, FL 32952 321-453-1193 or email k0vxmfl@gmail.com for vendor or other requests.

Be sure to pack your swimming, surfing and 10 G gear!

73 Chuck KØVXM Conference Chairman

The Wayback Machine
Gleaned from the pages of Cheese Bits, January 1963 (Vol. V Nr. 10) (Authors comments in *italics*)

- Helen's cover page illustration: A snowman complete with snow flakes!

- Reported the ARRL petition to the Postmaster general, requesting issuance in 1964, of a postage stamp honoring Radio Amateurs on the 50th anniversary of the League's founding. The application was printed in full, and included a detailed list of Amateur accomplishments and contributions (*four 14" high columns*). (*More to come later on the Packrat's involvement with this effort.*)

- Included was a synopsis of an article that appeared in the Sunday Bulletin (*things that aren't there anymore*), which provided information purporting to document the unreported death of 7 Soviet Astronauts. Clues to the conclusions were provided.

- Sprinkled throughout the issue was the slogan "Time For A Million". This was the announced goal for the Club score in January (*remember this was before Grid Squares, and multipliers depended on ARRL Sections*).

- The Philadelphia council of the American Legion donated equipment for a Ham station, to the VA Hospital in West Philly. Doubling as a local Civil Defense station, it will provide recreation for military veterans (*an opportunity for something similar now?*).

- Official Bulletin # 875 from ARRL. Effective January 2, 1963, the FCC has granted the ARRL request to permit a full kilowatt input on 420 – 450 Mc (*now MHz*), except in certain quiet zones which are still restricted to 50 watts,

- A report from Dave Zimmerman, W3LHF (later W3ZD, now SK), on his activities at RPI in NY. Dave was the club VP during this time (*while I was the Prez*); however, he was sent by the NADC to finish graduate work at RPI. (*Other club members pitched in to support me and cover the VP duties*).

- As condensed from an article in "Popular Mechanics", a number of short descriptors of positive contributions by Radio Amateurs were reported. These covered the gamut from emergency medical help, monitoring and reporting of SOS from ships at sea to providing communications during natural disasters. (*Good publicity!*).

- Crying Towel (*a Packrat tradition*) announced for the January 16 meeting.

- W3NSI reports on the new RCA Nuvistor, 6DV4, which has Gold Plated pins and shell. The Gold plating is intended to ensure good contacts for this UHF device (***Michael, take note***).

- Humor was provided by a list of Ten

Electro Commandments (Not related to … David Letterman's Top Tens). These were cribbed from a Navships bulletin. The first two follow, for your amusement. Others to be in future columns. **1. Beware the lightning that lurketh in an undischarged condenser (capacitor), lest it cause thee to bounce upon thy buttock in a most unseemly manner. 2. Cause thou the switch that supplieth large quantities of juice to be opened and thusly tagged that thy days may be long in this earthly vale and void of tears.** (*Read the rest in the full issue posted on the W3CCX website, OR wait for them in future columns*).

(Many *"folksy" comments about members, their families, and activities were included in this Cheese Bits. If interested, visit W3CCX.COM and read the full issue posted there*).

thirty, **de K3IUV**

….Strays

Famouser and famouser: Cheese Bits garnered a mention in the ARRL Contest Update column for December 5, 2012. See: http://www.arrl.org/contest-update-issues%3Fissue%3D2012-12-05

Tnx to KB1JEY for the heads up

January Contest Clock Activity Hours
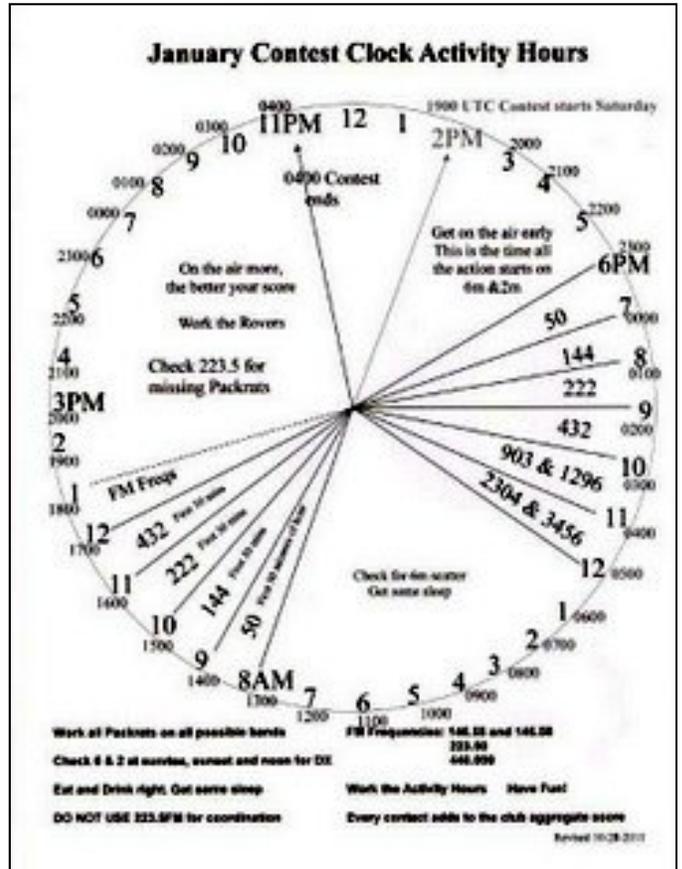
Just a reminder: A large, easy to read (and print) color copy of the contest clock is available on the Packrat web site at http://packratvhf.com/clock2012.pdf Or via email from billk3ege@gmail.com

...Strays

Joe's new hat at the December meeting.
Packrat with Pack Bear?

Events

For inclusion, please direct event notices to the editor.

January VHF Sweepstakes Contest - January 19-21, 2013. Please attend the January meeting for additional tips on planning, strategy an a review of last years contest!

SVHFS Conference—April 19-20 2013. Hilton, Cocoa Beach FL. See http://www.svhfs.org or email Chuck at k0vxmfl@gmail.com for further details.

ARRL June VHF QSO Party - **Contest** June 8-9, 2013. The annual Camelback trek. Details to follow.

ARRL August UHF Contest - August 3-4, 2013. Details to follow.

10 GHz and Up (round 1) Contest - August 17-18, 2013. Details to follow.

September VHF QSO Party - Contest September 14-16, 2013. Details to follow.

10 GHz and Up (round 2) Contest - September 21-22, 2013. Details to follow.

EME Contest 2.3 GHz & Up Contest - September 28-29, 2013. Details to follow.

MEETING NOTICE

PACK RATS

FIRST CLASS

MT. AIRY VHF RADIO CLUB, INC.
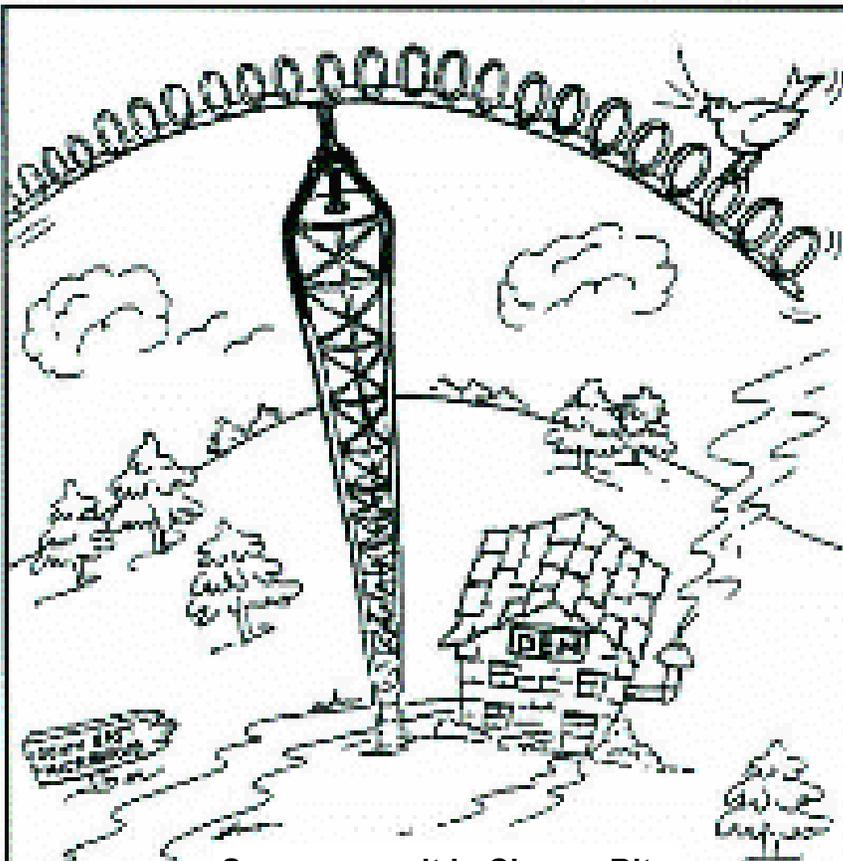
Say you saw it in Cheese Bits