



CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume LIV

February 2013

Number 2

PREZ
SEZ:

Another January Contest and another great showing by our members. I worked 51 packrats which could be a record for me, so thanks to everyone for seeking me out and helping the club. My score was 80 percent of last year's score, and I'm not sure why. Was it activity, or could it have been my more casual attitude with emphasis on allowing tailending when about to QSY to another band?

We had a great time at the wrap up; with thanks to our host KA3WXV, not only was everyone fed, but we all had an opportunity to share our results. The next step is to carry through on our strategy to implement all of the changes and repairs that you noted during the contest. That's the best time to identify what needs to change and improve. **You have nearly eleven months to get your station to the next level.**

Standby to hear all of the sad tales of woe at the next meeting, our annual "Crying Towel" meeting, don't forget to bring your own crying towel to soak up the tears as there is only one prize towel available to the best story. From what I've heard in anticipation, there will be some sad stories to hear. Frankly, I thought my story from last year was indeed a sad one, worthy of the prize, but somehow the judges thought otherwise. Lets see what this year

brings.

It's time to sign up for **Ladies Night**. This event will happen on March 16th and once again we have a great entertainer and an evening filled with dancing and socializing outside of the sphere of radio. Go to the website and register, it's a deal that you can't pass up.

After Ladies Night, our next major event is the June Contest. I'd like to see a record number of members attend this year. This is a radio event that is really fun when you share it with many other members from an outstanding location (over 2000' ASL) with top notch equipment all ready to work everyone participating in the contest. We have a full line up of band captains and functional captains ready to bring everything required to pull off another successful event. We just need you to **come and join the fun**. Make it a point to come for the full four day event. We set up on Friday, contest Saturday and Sunday then tear down on Monday morning, usually out of there between 10 and noon. If you can't make all four days, come for 3, 2 or 1 and enjoy the fun. We need many hands to make the load light.

Constitutional Objective number (4) is "To encourage application of the highest engineering knowledge and standards in the design, construction, and use of radio communication equipment." This is a great

Pack Rats **CHEESE BITS** is a monthly publication of the **Mt. AIRY VHF RADIO CLUB, INC.** -Southampton, PA.

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PACKRAT BEACONS - W3CCX/B

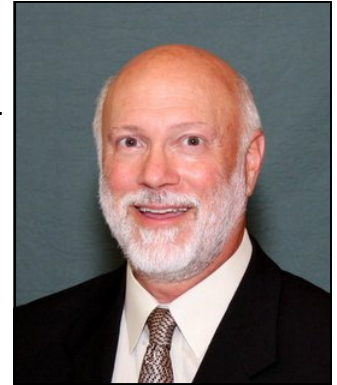
FM29jw Philadelphia, PA
50.080 144.284 222.064 432.286 903.072 1296.245 MHz
2304.043 3456.207 5763.196 10,368.062 MHz (as of 1/08)

MONDAY NIGHT NETS

<u>TIME</u>	<u>FREQUENCY</u>	<u>NET CONTROL</u>
7:30 PM	50.145 MHz	K3EOD FM29II WA3QPX FM29di
8:00 PM	144.150 MHz	N3ITT FN20kl
8:30 PM	222.125 MHz	KB1JEY FN20je
8:30 PM	224.58R MHz	W3GXB FN20jm
9:00 PM	432.110 MHz	WB2RVX FM29mt
9:30 PM	1296.100 MHz	K3TUF FN10we
10:00 PM	903.100 MHz	WA3SRU FN20le

Visit the Mt Airy VHF Radio Club at: www.packratvhf.com or www.w3ccx.com

time to think about how you will be approaching the next improvement you are making to your station. Are you using the highest standard as your reference, or are you taking a short cut to get the job done quicker. I know that it pays off to **take the time to prepare the way for more**



automation. For instance, if you are adding band switching, make it ready to be computer switched. So often we take the short cut and just put a simple rotary switch, when you could let your logging program or even better your radio trigger the band switching. **We think we'll get back to it later and improve then, which often never happens.** Are you adding a band? Then make it a GPS disciplined band, or at least get the transverter that will take the discipline when you add it later. I'm encouraging you to seek a higher level of engineering in the implementation of your next band, what band is that? I have added 47GHz having had such a great experience with 24GHz due to the low dew point during this past contest.

April is not far off and it contains the NEWS group conference in a new location just outside of Hartford, CT. I know of at least 6 from our group who are going, lets get out to this great event and support our NE neighbors. I'm planning to board AMTRAK for the round trip, anyone care to join at 30th street station?

Have a great month and let's work on lots of bands,

Editors note...

If you haven't sent a copy of your contest log to W3KM please do so as soon as you can. We need your log for the contest summary table that's published each year in Cheese Bits.

Dave's email is Dave Mascaro W3KM
<w3km@verizon.net>

Thanks!

—Lenny W2BVH

How'd You Do in the Contest?

Answers to this simple question posed by your editor on the Packrat reflector came thick and fast. **Thanks to everyone for your overwhelming responses!!** There's more material than I can fit in this month's issue and still limit it to less than 10 MB, so look for more next month! NOTE: I've excluded individual score grids from your replies. As I've done for the last few years, I hope to have a complete table of **ALL submitted scores** in Cheese Bits as soon as all members send their contest logs to W3KM. I think he will get the information summarized for Cheese Bits in time for the March issue. — Lenny W2BVH

From Michelle, KB3MTW

Saturday I went to bed depressed with only 1/2 of my all time high, thinking I exhausted all my local contacts, but amazingly with arm pulling got a few extra people on the air and pulled through. I actually made 17 more contacts this year and beat my record of 2 years ago. Because I was vertical on all bands and the living situation, I only can claim 10 grids listed in the logging program. Had a ball and looking ahead to better myself at every contest.

From Joe K1JT....

Today I submitted my worst score ever for the modern (grid-based) January VHF SS. My log is an excellent example of why ***MANY BANDS*** is the watch-word for scoring well in this event.

However, for a number of reasons, this time I operated on only one band, 2 meters. I made 268 QSOs in 96 grids, for a claimed score of 25,728.

Although my score was way below my previous efforts, the operating was (as always in this event!) lots of fun. I don't know what the record may be for grid multipliers on 2m in this contest, but I suspect that 96 multipliers grids on 144 MHz might be an all-time record. It certainly is, for me. In case you're interested in more details:

I didn't do any meteor scatter this time. MS QSOs are tough to make without skeds, and even with many carefully planned skeds the QSO rate can't be better than 3 or 4 per hour.

So, **my secret weapon** was EME -- I made 73 EME QSOs in 67 grids. No skeds; I just called CQ, and answered CQs, off the moon. There's plenty of activity on 2m EME, especially in Europe, and with JT65 you can make as many as 10 QSOs/hour. Moonrise was around 11:30 a.m. on Saturday, so the moon was just getting above my trees when the contest started at 2 pm. From 2 to 7 pm I made only 41 QSOs, but they were in 37 different grids. I did more EME later Saturday evening, and then repeated the whole process on Sunday. Otherwise I operated as normal, using SSB and CW. I got a full 8 hours sleep.

Here are the 67 grids worked by EME: BP40 CM88 CN87 DM06 DM43 DM69 EL96 EL98 EM31 EM79 EN60 EN84 FM19 FN35 FN42 FN84 IM98 IM99 IN94 IO71 IO91 IO92 IO97 JM49 JN24

...How'd You Do in the Contest cont'd

...K1JT cont'd

JN48 JN49 JN55 JN58 JN69 JN70 JN76 JN86 JO01 JO02 JO23 JO31 JO32 JO33 JO50 JO51
JO52 JO53 JO60 JO63 JO65 JO70 JO77 JO82 JO89 JO99 KM09 KN04 KN22 KN88 KN96 KO03
KO37 KO48 KO49 KO50 KO85 KP04 KP40 LN14 MO13 QF55

Other than these, I worked a more-or-less normal total of 29 grids by tropo.

From Joe, KC2TN...

Been having audio problems but found a solution....!
The more wine I drink the better it sounds!



From John W3HMS...

GM Herb.....my health was fine.....equipment health was bad.....I could not even work you on 222, HI!! I had equipment failures on 2m, amp went from 160 w to 30 w!!, and on 432 where they heard me but I did not hear them and on 6 m where my Moxon pointing must be improved. The good news was my new 903 amp of 200 watts with DEM xvtr and IC 706 worked better than expected. I had an unplanned plus with 4 EME contacts on JT65C so 4 grids in Europe. The 6m FSK441 was a half QSO with N1JEZ...perhaps better next time. It seemed to me that conditions were down and participants fewer. I was disappointed to work so few RATS, I suspected a boycott but ruled that out, HI!! My score was 66 % of 2012 so goals not achieved; many improvements thus planned over 2013.

From Dan, WA3NFV...

I made one contact - 446.000 MHz.

AND a reply by K3IUV: SAVES MAKING A DUPE SHEET. But are you bragging or complaining?

AND Dan's reply: I think that's one more than I've made in the last 25 years!

From Mike WB2RVX...

Tnx to everyone in the club and to the rovers who braved the elements. Score: 200431

From Ray, N3RG...

Had a great time as always especially meeting up with the multitude at AL's (K3EOD) on Sunday. Everything worked as well as could be expected with the exception of 10ghz. The main tower and antennas were repaired and mounted on 6' mast with tower at 45' due to storm damage. Next year everything should be back in full operation. Total Score = 91,000

From Joe WA3SRU...

First off, the 2 attached pictures are of my antenna setup before and after Hurricane Sandy hit. As you can see, the antennas are leaning about 15 degrees since the mast bent. The antennas are leaning down. This did affect my contacts, especially the higher bands. My bucket truck guy left me



hanging 2 different weekends. So, when he didn't show the morning of the contest, I decided to just work what I could with the bent mast.

Last year I had over 34,000 points. This year I had over

24,000. Not too bad considering the mast. Last year I did work a lot of stations/grids when 6 meters opened up several times. This year I only worked 4 grids when 6 meters opened late in the contest. I will be looking to replace my Rohn 25 tower with a crank up/tilt over tower in the spring. Then I won't have to rely on the bucket truck anymore.



From Phil, K3TUF...

Another fun contest, thanks to all who participated. My score is down 20 percent from last year. Of course I need to find out why. Was it participation, or possibly the various issues that plagued me. We did have several dedicated Rovers in our area: K1DS, W2MC, NN3Q, KM3G, NE3I, N3XUD, N2SLN and VE3OIL. Thanks for your dedication and braving the wind and cold, we appreciate it. I did not find the 6 meter opening that folks are talking about, when I heard about it, I didn't find any distant stations. For most of the contest the line noise was extremely high on both 6 and 2. Looks like I need to mount an effort to mitigate noise. Some meteor scatter skeds were blank, either no rocks or no one on the other end. On several occasions 6m was lost to what ultimately was found to be an intermittent cable. Took an hour off to find it. Back in November I started grooming a new computer and brought it into production just after new years hoping that was enough time. It was not. There were many disruptions that were programming related that caused frustration. Fortunately the new computer has an SSD, so it was back on line quickly. But this should never happen. Hope to diagnose that one soon. The most exciting event of the weekend was the contacts on 24GHz, all of them were on SSB. With the dew point so low, signals on 24 were louder than the "lower" micro-waves. This is something to look forward to in the future. Thanks for all the contacts.

I also didn't mention that my 10g was crippled for some reason. Will be a little while till I get up to figure out that one. The one meter dish worked like gangbusters until a week before the contest. I need to count how many rats I worked, should be plenty. Total Score = 269,952

From Michael, KB1JEY

It's a lower score than last year but with no openings [that I was able to use] and no uWaves, I'll take it. Total score = 6279

From George, KA3WXV for W3CCX....

We used Bill's IC 746 for 50 and 144 and Mark's FT 729 for 222 and 432. El's 222 FM did not seem to work on channel 1 (223.5) so we used Mark's rig for 223.5 FM. The rotator "balked" at times but did work. Looking at the grids I would guess we need more elements and height! HI HI. My take on the conditions: they were poor especially on 6 where I was expecting more grids. FM on 222 worked poorly but we were horizontally polarized and most other stations were vertically polarized. Operating hours started at 2:00 pm Saturday till 6 and Sunday from 10:00 am till 4:00 pm

Operators included Mark WA3QVU, Michelle KB3MTW, Rich K3BFS, Rich Luce AG3L, Tom Ledoux KD3DI and George KA3WXV.

Thanks to all that helped install the antennas, loaned and operated the equipment and a special thanks to George N3HBT for all the hours of his time before and during the contest.

I consider the operations at WARC a success and I hope we can encourage even more WARC members to try out the antennas by borrowing or bringing their own rigs and operating. Total Score 2,822

NOTE: George and Rick installed these at the Senior Center in four sessions. The antennas were all donated by various Packrats over the past few years. The rotator is a club CD45 unit. Thanks to George Brechmann for supporting our efforts there. Tom provided his FT857 and Bird wattmeter for testing. Everything seems to be in working order.



From Jon, W2MC/R...

Too cold/tired at the end to go back to FM19 for more contacts. Otherwise a great contest! Total 6 Grids Activated - FN30, FN20, FM29, FM28, FN19, FN10. Total Score: 12426. See: *Stealth Rover later in this issue*

From NN3Q/R crew...

The NN3Q/R crew (K3WGR and NN3Q) would like to thank all those who worked us during the January VHF contest.

We just want to say thank you and let everyone know how much we appreciate all the stations who waited to make contacts with us on as many bands, and grids as possible.

Our continual preparation for the contest included the installation of a new 300 watt 2 meter amplifier, and the associated relay mapping needed to keep all those watts away from other receiver front ends; we installed new 144, and 220 vertical antennas, and a Yaesu FT2800 FM rig (2 meters) only. Our antenna configuration was also changed moving the 2 meter yagi to the top of the stack, while placing the 6 meter Moxon on the bottom. One slight glitch popped up in our 2.3 Ghz receiver but at this time we do not yet know if it is a sticky relay or that the second stage amplifier went south. Soon to be determined.

Our rove was planned for SE PA, activating four grids. The planning paid off with over 500 Q's, 64 band grids, highlighting 19 QSO's on 10 Ghz, and 48 Q's on 1296. We will be scoring in the low 100,000 point range breaking our all time high score.

From N3NGE crew...

Len, N3NGE: The N3NGE Multi-Op station fared pretty well this year. We have been blessed with a long run of contests without any major issues and I strive to keep up with maintenance and to make incremental improvements. This year I replaced three of the six PC's and two monitors. Added an SDR receiver for 2 Meters, I was also able to track down and remediate troublesome RFI/QRN issues. As is always the case there were many projects that did not come to fruition but they are still on the table for later.

I will take this opportunity to again thank the operators who from my point of view make it worthwhile. As most of you know my attention span during a contest would be very intermittent if it wasn't for the camaraderie and team spirit to help keep me focused. I do like to operate certain parts of the station like the Microwave position or maybe some WSJT as I did on 2M this year but once I know the station is working properly I am perfectly content to observe the operators make it happen and to be available as a relief operator. I also like to "tap the gauges" from time to time to monitor the electro-mechanical beast and to unjam any issues that hinder the operation.

I also want to thank the rovers for the contacts, we do appreciate the rovers no matter what bands or grids they have. It is expected of N3NGE ops to give them their due. We actively seek them out and try to give them priority in the queue whenever we can.

Dave K1WHS: I have seen a few scores and each one gives me a more distinct impression that the N3NGE score is very very good. The section totals are a good indicator of station performance. The contact total is a testament to the dedication of the operators (as well as how well the equipment is working!) As I see it, the meteor scatter results are just great and really set us apart from most other stations. My hat is off to the ping jockeys who worked overnight and added all those grids. Our totals appear to be the best in the northeast for the most part. I see that K1TEO out gridded us on some of the higher bands, but overall, we done good.

I know how hard it is to get a complex station at peak performance for a contest. It is not trivial and Len did a great job and made it all look easy. We just hit the footswitch and push the key, then BINGO! we have a good Q! It all looks so simple, but there are miles of wiring that needed checking, noise sources to track down. Amplifiers needed testing. The list is endless. I thought that everyone was really tuned in to passing stations and MULTS between the bands. Very few were missed as a result. That is a hard thing to do with untrained ops or non contesting "DX" types. It is sure a lot easier to work a new station and just go on and work the next one. Passing them up or down takes effort, but is the key to a good overall score. This fact does not have to be mentioned to this group. Impressive!

From Herb, K2LNS for station WA2FGK...

The week prior to the contest, I came down with the flu. I spent Monday, Tuesday, and much of Wednesday in bed recovering. By Thursday I started feeling a bit better and started preparing for the contest. The only problem I saw was being drive starved on 5760 mhz. I was able to adjust the Omni 5 and get a bit more power on 28 MHz. All looked good.

Friday evening I turned everything on and thought I would catch some guys on for tests. I figured 2 meters would be a great start. I let the amps all warm up and flipped the Old Henry 8877 into transmit. The power came up to a solid KW on the Bird Watt Meter. I put my keyer on and noticed my power jumping around. Quickly I shut things down. Back in transmit and the power had dropped tremendously. TROUBLE !

I use this system on EME using the JT mode. And knew the 8877 has been dropping in power.

WA2FGK cont'd

Everything else looked OK, so I decided to shut it down and change tubes. I have a spare 8877 which I knew would put out about 1,700 watts with the same power supply. Of course, I drop the drive down to run around 1300 watts.

After 2 hours, I get the tube changed. Turn on the filaments and let them bake all night.

On Saturday, I turn on the 4,000 volt power supply and lower the drive. I start to tune up the amp, and the power was still very low. I check all drive levels and they look good.

I stop what I'm doing and say to myself " Self check the Bird ". I switch to another Bird watt meter and like magic, my output came up. Now how the heck can a Bird Watt meter go bad ? I have no idea - But it did.

The contest started at 2 pm, Because my voice was so bad, I instantly used the voice keyer. Things were going at a slow but steady pace. At 3pm, I notice my power is down on 50 MHz. Way down. I have a separate Omni 6, that is used thru a switch box that runs 50-222-432 MHz into the three transverters. I have never had a problem for 15 years with this system. My power out of the amps was down to almost nothing.

I shut the rig down, and take the Omni to my work bench. I check the power level on 28 mhz and it reads 100 mw. Not good. It should be nearly 2 watts. I jiggled a bunch of cables and the power came up to one watt.

Back to the operating table and get the radio back on line. Bingo - The power is back up where it should be. I operate for another 30 minutes and the power fails again. Like a good technician, I rap the radio and the power came back up.

For the rest of the contest, every time I used this radio, I had to shut down the 12 volts, to cool it off. I was not able to call any CQ's on 50 MHz, the rest of the contest. So I missed several short openings and many new grid squares.

I stayed on until 11 pm. Both tired from being sick, and disgusted with the Omni 6.

Sunday I wake up with a sinus infection. My headache was so bad, I could not wear my glasses. I stayed in the house until noon, when my meds kicked in. I got into the shack and started having some nice runs. Mostly hearing, "Where ya been ". My head started pounding and after two hours, I went back in the house. I got back on the air at dinner time and tried to find as many stations as I could from the club. The last station I worked was John W3HMS on 144 mhz. We switched to 222 MHz and I had no power out.

Out of disgust, I Quit.

With tears in my eyes, I write this song....

From Lenny, W2BVH...

From a hardware perspective I had an uneventful contest; just what I was hoping for. Especially after having an arc-over in my 2 meter amplifier a month earlier. I got on Friday night and checked out my 4 bands with Jerome K3GNC and a few other 'Rats who were doing likewise and for me all was well. No crying towel for me this year! My goal this year was to go over 200 Q's and I met that goal easily, but I did have to keep the "meat in the seat" for quite awhile. I had some nice Es Q's on 6 both days of the contest and I also found folks much more accommodating early in the 'test in running the 4 bands I have. It's evident that my 12 watts on 432 is not enough, and I will be doing something to fix that in 2013. I also hope to find enough time to finish my 902/3 setup in 2013 and maybe finish up the 2304 MMDS transverter. We'll see. Thanks to all my fellow 'Rats for the Q's. Some of them took a bit of work to complete.

Mag Mount Rover and Exotic Operational Deployment

By Griff, NE3I

Having dismantled and sold the Hex Beam and Log Periodic, I had ideas of cutting yagis into small enough sections to fit into the trunk of my Audi TT convertible and, finding a QRP Portable QTH. Alas, never got it done. So, put the Pomeranian on vacation with the pet sitter and at about 1230 Saturday began "strapping stuff together." Threw the IC706 and cables into the TT with the 4 watt 220 HT and mag mounted a 6 Meter Hamstick, 223 vertical and a 2 meter Squalo. Voila', a 4 band Rover. (Former novices will recall the 40 Meter Dipole Rule i.e., 15 Meters being the third harmonic of 40, a 40 Meter dipole resonates satisfactorily on 15. $432/144 = 3$, the Squalo seems to work fine on 432.) By 1315 (local), 1815 GMT/Z, (i.e., Quarter Past one), I was on my way to the "Gap Grid Corners." K1DS will be relieved to know that I was using the cigarette lighter, (or, whatever they call it now), so, everything worked without any polarity problems.

From 1907Z through 2355Z I conducted rover operations initially, on a hillside in FN20 off of Route 23 about 2 miles southeast of Morgantown, then from a "serene" location in the vicinity of Goodville in FN10, next, from a community center parking lot on the high ridge line traversed by Route 897, (still in FN10), then, along the side of the road in a cul de sac on a Shady Hill off of Route 896 in FM19 and finally, from the top of the hill on Route 30, just East of Gap in FM29. During that 5 hour period which, included travel between locations, I worked 70 Qs running all 4 bands with K3TUF and N3NGE from all 4 grids. Seasoned VHF Contest veterans, the operators at K3TUF and N3NGE know that the rovers are out there for only a short time. They respond quickly and make you feel appreciated, even if you are only giving out low point Qs. A word of caution to future rovers: navigating the roads out there, especially near dusk, requires care. - Horses and Carriages!

-A side note, while at the location in FM19 and facing West/South West, I observed two half second meteor trails just above the horizon at around dusk. Query: what would you estimate the useful scatter time would be on 6 Meters for a meteor that leaves a visible burn trail of at least a half second? More speculation on this in the final paragraph.-

Tired, (you know, a rover is either driving or operating in the driver's seat most of the time), I limped home working WA3SRU on 2, 223 and 432 at 0100Z January 20, while entering my garage.

After needed sleep, I took advantage of Al's gracious invitation to visit K3 Exotic Operational Deployment and from about 10 AM until 3:30 PM, (that's 1500Z-2030Z Rover Cavalry time), had the privilege of operating the 6 Meter position there. It was a pleasure to share the contest camaraderie with colleague operators and visitors, Bruce, WA3WUL, Chuck, WA3IAC, Bob, W2SJ, Ray, N3RG, Jon, W2MC/r and of course Al, K3EOD. (I probably would not have been into the contest at all except for Al's encouragement to "Just come down and have fun. That's what it's all about.") By the way, Al serves a serious hot roast turkey sandwich

with mash potatoes and gravy, -worth the trip itself. Feeling emancipated to be out from under deed restrictions, I also managed 13 local rover Qs including, 5 bands with W2MC/r, from outside of AI's. Thanks again AI!

Working my way home, by 2058Z, I found Exit 50 off of Route 55 and from that vicinity until 2117Z, worked another 14 rover Qs including, 4 bands with each of W2SJ and WB2RVX. WA3EHD pulled me out on 2 Meters. It then took me almost 2 hours to return near home and find a useful site in FN20. -I first tried the EOC parking lot in Eagleville but, found there to be too much interference for the front end of my IC706. From "Five County Hill," near the Methacton High School, 2315Z to 0023Z January 21, I worked 23 more Qs including, WA2OMY, N3ITT and W3KM each on 3 bands, W3SZ on 4 bands and, ON 6 METERS, W3LI in FN21! On 6 Meters, I also worked stations from EM74 and EM63, a last minute treat considering that I was only using the mag mount Hamstick and 10-20 watts! -Here is where we return to the meteor siting/scatter query from the previous evening. Both stations were strong but, fairly short lived, i.e., certainly 5 minutes or less. Surprisingly, the EM74 station called me following a local contact. My tactic then was to tune around and jump on a strong call hoping to be the first in line. It worked with the EM63 station. (EM74 and EM63 appear to line up in a straight line Southwest, EM63 a slightly shorter distance, the propagation apparently, shortening.) Could there have been meteor scatter present sufficient to complete mag mount vertical contacts? Whatever, it just goes to show you, make some noise, YA NEVER KNOW. Total score 5275. Not bad for virtually

QRP power, mag mount mixed polarization and only about 7 hours operating time. As AI said, the idea is to have fun. Thanks for the contacts. 73. Griff



Griff in Audi Rover. Note Itty Bitty antennae on trunk lid.

Comments from the peanut gallery: 1. Griff, for 7 hours operating out of car, I'll take 5K all day!! Good job, and thanks for getting on. Gary OMY 2. Well done Griff. From one low-power rover to another, you had the gumption to stick it out and put in a lot more hours (and miles) than I did on my one day rove. But for those that haven't tried it, it's a neat way to enjoy the contest and sample the signals available at different locations. Good thing for both of us that the bitter cold waited until Monday. I wouldn't have stuck it out in the below freezing temps we have this week! Next year you need to get more bands in the car. Those contacts add up quickly (Both for the rover and the rovee!). Bert, K3IUV 3. Hello Griff, Nice write up. I found the comment about watching out for the horses and carriages amusing; we have horses and buggy's out here in Dutch country. Carriages are only used by the English speaking people living in the city. Thank You for the contacts, we do appreciate the rovers no matter what bands or grids they have. BTW if a burn lasts a few seconds visibly I would expect (guess) strong radio reflections at least 3X as long on 6 meters and 1.5 x on 2 meters. Len NGE

The W2MC/R “Stealth” Rover

January 2013 VHF Contest

I am sure most remember the “No-Budget” Rover from the June 2012 contest. Well...in late December, I succumbed to the siren-song of a ‘new-to-me’ Ford F-250 pickup, and traded in both my Durango (the daily driver) and the Ford Van (farming/rover vehicle) to purchase the F-250. This, of course, led to a quandary...”how to turn the new pickup into a Rover?” Significant re-think and re-design went into the conversion, but I now have a “new” vehicle for the VHF contests – the Stealth Rover.

Why Stealth Rover? The new truck came with a lid-type fiberglass bed cover – the kind that spans the bed, fits over the bed rails. It makes the truck look great, but its heavy and a challenge to take off the truck, (hinged from the bed-front) which limits access to the antenna mounting points. To address this, I created a mast and antennas that could be quickly disassembled to fit inside the pickup bed, yet just as quickly be assembled for use at the next stop. This means that when in “scoot” mode, the truck looks like any other pickup; only the mag-mount vertical antennas are exposed.

How I built the Rover:

Mast and Support – The mast is a two-piece unit; 12+ feet long when assembled, but can be broken-down to fit the pickup bed. To hold the mast vertically, I found (at Cabela’s “bargain cove”) a bicycle carrier elbow bracket that fits the 2 inch receiver hitch. The bike carrier assembly was long-gone, so I got it cheap. At each stop, I would assemble the mast/antennas and drop the mast into this support. The rotor was via “Armstrong” (no, not Lance...)

Antennas – I used a different combination of antennas for this trip. On the mast, top to bottom: 6 meter square loop, 220 MHz home-brew, 432 MHz 11 element Cushcraft, 2 meter 5 element Diamond. All of the above were transported fully-assembled in the bed of the pickup, and attached to the mast at each stop. Two mag-mount antennas (2/440 and 220 FM) were attached to the roof.

Rigs – I wanted to minimize the number of radios brought along for this trip.

- 6/2/432 SSB-Icom IC-706MKIIG (100w on 6m, 50w on 2m, 20w on 432 MHz).
- 220 SSB-Yaesu FT-736R (25w)
- 2/440 FM-Yaesu FT-7800 (50w on 2m, 40w on 440 MHz)
- 220 FM-Kenwood TM-331A (25w)

While in motion, the FT-736 rode on the passenger seat, and the IC-706 rode on the floor of the cab. The FT-736 was moved to the center console of the pickup, and the IC-706 was placed on the dashboard, which turned the passenger seat into an operating position. The logging computer (an old Lenovo netbook) sat atop the FT-736 for logging contacts.

Electric Power – A large car battery carried in the back seat area of the pickup provided the 12v power for the radios. This battery was charged while driving, and disconnected from the “main” battery when operating. 120 volts (for the netbook charger) was created via a 200 watt power inverter.

...Stealth cont'd

The ROVE – January 2013 VHF Contest

DAY 1 (January 19):

I had published a general schedule prior to the start of the contest, but that plan was heavily impacted by the real world. Since the contest doesn't start until 2 PM local time, Saturday morning was spent with final assembly and test...but as usual, the little bits and pieces took longer than required and caused me to arrive a bit late at my first stop...so for most of Saturday I was running behind my anticipated schedule.

I started in FN30ah – Long Branch, NJ, the “Seven Presidents Park” parking lot. This is a reasonable location for January; the parking lot was empty and overlooks the Atlantic Ocean. I was able to work both locals and the larger New England stations. This will not be a workable location for the June contest, as the lot will be full of weekend vacationers. In June, I want to try Hartshorne Park, further north and higher than this location.

Next FN20xj – Atlantic Highlands, NJ, Mount Mitchell Scenic Overlook. This is a great location! I was able to work into New York/New England, and also worked or heard several South Jersey stations. If I am in the area – this is a “must stop”.

Next FM29ov – Medford, NJ, Chairville School. Since I was running late, I decided to change plans from FN20 Burlington County Farm Fair (Columbus NJ) and FM29 Pole Hill Park (Gibbsboro NJ) and operate from the Chairville School parking lot. This location has several things going for it – a large illuminated parking lot, relatively clear in all directions, and sitting atop a ridge. From here, I departed for home.

Approximately 190 miles traveled on 19 January

DAY 2 (January 20):

I started in FM28mw – Cape May Point, NJ, Sunset Blvd. I returned here because it's “as good as it gets” for FM28 in NJ.

Next FM29II – Vineland, NJ; QTH of K3EOD. Added 300 Ghz (laser) contacts to the log.

Next FM29mt – Gibbsboro, NJ, Pole Hill Park. This was a good location in June; but not as good now. A very close football playoff game probably impacted the QSOs.

Next FM29 – Gap, PA, on the side of Lincoln Highway (Rt 30). Significant 2/220 FM activity made this a worthwhile stop before I moved to FM19.

Next FM19 – Gap, PA, on the side of Lincoln Highway. Made very few contacts here; FM only. I planned to return to this grid to operate, but ultimately did not.

Next FN10wa – Paradise, PA, Paradise Community Park. Not a good location (looked better on Google Maps; but it's in a valley). I was able to make a significant number of QSOs, and with a better location, could work back into South Jersey. From here I was dead tired, and headed for home.

Next FM29 – caught a few contacts by the side of the road which pushed my QSO count over 200 and point score over 12,000 – made it home around midnight.

Approximately 330 miles traveled on 20 January

Final Tally: Visited 6 Grids, made 201 QSOs scored 12,426 points

OBSERVATIONS – What Seemed to Work:

Battery Power – Operating with a single car battery, located behind the passenger seat and charged while driving, worked well. I had no power-related issues.

Antennas – The 6 meter loop worked well and was a LOT more convenient than the three-element yagi used in June. The 220 and 432 MHz yagis also worked very well.

...Stealth cont'd

Rigs – The FT-736 worked well for 220 MHz SSB. The IC-706MKIIG, which I wasn't too happy with during the June Contest, seemed to be "much improved", and was the primary rig for 6/2/432. I was concerned with the power level on 432 MHz (20 watts) but that did not seem to be a significant restriction. The FM rigs worked 100%. QSY's were slowed by my slow logging, not by efforts to change bands.

Rover/Limited Rover – Initially, I planned to operate as "Limited Rover", but the potential to add several thousand points with laser QSOs made it worthwhile to change to "Rover".

What Didn't Seem to Work:

Mast – Completely assembling and disassembling the mast and antennas at every stop, even though it only took about 10-15 minutes, became a significant handicap. I didn't go back to FM19 to operate because I was tired and didn't feel like assembling the mast/antennas all over again in that grid.

Antennas – The Diamond 2m yagi was a good performer for its size, but its thin aluminum tubing construction makes it too fragile for Rover use. The Cushcraft 432 beam was very robust, and I may obtain one for 2 meters. I used the Cushcraft antenna because it mounts centrally to the mast; it's not an "end-mount" antenna. The mast balance prefers this, and before the June contest I will convert the 220 antenna to center mounting. The 2/440 FM vertical mag mount antenna would have benefited from a higher-gain antenna.

Antenna Height – a means to get the antennas higher in the air, which I noted in June, would still be useful (though less important with the pickup body). M2 makes a telescoping mast specifically designed for rovers that slides-into the receiver hitch, but it's very expensive.

Rigs – The IC-706 twice experienced operational difficulties – while it appeared to be working, and appeared to transmit, there was no receive audio. With some manipulation of the rig, I was able to bring it back. "Internet Wisdom" states the cause may be dirt/corrosion on the contacts between the faceplate and main body of the transceiver, or perhaps loose internal circuit card 'hold-down' screws.

Additional Capability – It would be 'nice to have' SSB available while driving; particularly for 6 meters. The FT-736 is a huge radio compared to the IC-706, and is taking-up too much space for the number of QSOs it's generating. Adding a 1.2 Ghz module may make it worthwhile.

Computer – The netbook I used for logging is very small/convenient, but the size makes it tough to use for logging.

Lighting – Night operations are still a problem due to lighting; particularly with the computer

What To Try Next:

Rigs – Can I minimize the number of different rigs? Can I find a way to "hard-mount" them for easier operation/use? Additional bands?

Mast/Antennas – Can I hard-mount the mast and antennas, so I don't have to re-build at every stop?

General Notes:

When I started with the Rover, I expected to attract the attention of the locals; particularly "official" attention. They don't seem to notice, and when they do, they appear unconcerned. For example, as I was assembling the antenna mast, the Ranger at the Mount Mitchell Scenic Overlook drove by me with no more than a smile and a wave.

...Stealth cont'd



JANUARY 2013 VHF SS ROVER REPORT K1DS/R

The weekend weather report was supposed to be mild and sunny, so I set up the rover van on Friday, checked out a few last things, like changing the battery in the keyer for the microwave set-up and then relaxed. Knowing I could not operate much of Saturday as we had a wedding to attend, I went about operating relatively casually, planning a route that would keep me in the heart of the activity and relatively close to home. I went to the hill just a few miles from home, behind the Training Center on Potshop road, and set up all the antennas and got right on at 2PM. I kept busy for almost 2 hours and made QSOs on all bands through 24GHz, including a run through all bands with Roger, W3SZ. It felt as spring was in the air, and I was surprised when I heard a car motor start up while I was up on the hill. I hadn't seen anybody come or go while I was there, and the 2 vans that belonged to the center, parked nearby were empty. Surprise—someone else had that spring feeling: a small car pulled out from being hidden between the two vans—a young lady and her friend enjoyed the secluded spot also.

I got home in time to clean-up, get the tux on and head out with the XYL for the evening, with 4K points in the log. I managed to work the home station close to midnight when we got home, making QSOs on the four lower bands for a 500 point log.

Sunday morning I headed to the bank parking lot in Montgomeryville and continued making contacts there until noon. By then I had just about 10K points in the log, with nice runs through 10GHz with WA3DRC, K3IPM, WA3NUF, W3RJW, WB2RVX and K3IUUV who came with his all-band rover and Laser. Time to head out on the PA Turnpike to hit the next grids. I stopped at Len's and met the N3NGE multi-op team, and had a delightful lunch thanks to Linda, Len's XYL. She should get the Packrat XYL of the Year Award for the support that she provides for the operating team. I ran the bands with N3NGE and bagged a few more contacts with the other ops there that had their own radios. I was grateful to note that the trees lining the drive to Len's had been trimmed so that the rover antennas could pass easily.



By now the cold front was gaining strength and the winds were rocking the van. I pulled into a gravel lot in Churchville to run the bands with K3TUF, but the winds were so strong that I could not set up the 24GHz dish atop the van, so I simply kept it inside the van, opened the back door, and pointed it in the same direction. Bingo—20db+/S9 signals on 24GHz! Russ and Al were in their NN3Q/R Rover van and we managed to run the bands also, but I was **stymied** getting the logger to accept their calls from the new grid. I forced it to accept those contacts as “dupes” as I had worked them on all bands when they were on Mt. Penn in the morning. Later on I found out that the log program could accept the

.... K1DS/R cont'd

contacts if I used the "TAB" key to move the cursor, rather than the "ENTER" key.

The sun was still shining, but the temperature kept dropping as I pulled into the Blue Ball Elementary School parking area to add more contacts. Had runs with K3TUF and W3SZ through 24GHz again, and through 10GHz with N3NGE. Worked a few more stations and then headed up Rte 23 to a spot opposite Yoder's Restaurant. Bill, K3EGE gave me the tip on this spot as it was pretty high and clear. Sure enough, it was easy to pull in and look for contacts, but the noise level here was quite high, likely due to the local power lines and the transformer on the pole across the street. I did manage to snag an FM27 grid multiplier from there—as my grid totals were rather low, although I was piling on the QSO points.

Now it was time to drive to Gap to operate the FM19xx and FM29ax spots that also give me great access to the three big stations that I can run through 10GHz. There was a bonus there too as I also had three runs with the NN3Q/R team as we crisscrossed paths. The log was starting to look better as the points really ran up with all of those microwave QSOs, but my grid multiplier total was still rather low. For my finish, I drove back to FM29hx at the parking lot of the Newtown Square Community Center, and finally added some additional NE grids thanks to Jeff K1TEO, although the noise level was high and we never got past 1296MHz. I was watching the log totals and it



seemed that if I could add more QSOs that I could reach the 100K point mark, even with this limited rove. Sure enough there were many callers and we were able to run up and down the bands with so many of the Packrats and other locals. Sure enough, the final total was 100,800 points on the strength of 483 QSOs that yielded 1600 QSO points and only 59 total multipliers.

73, K1DS/R

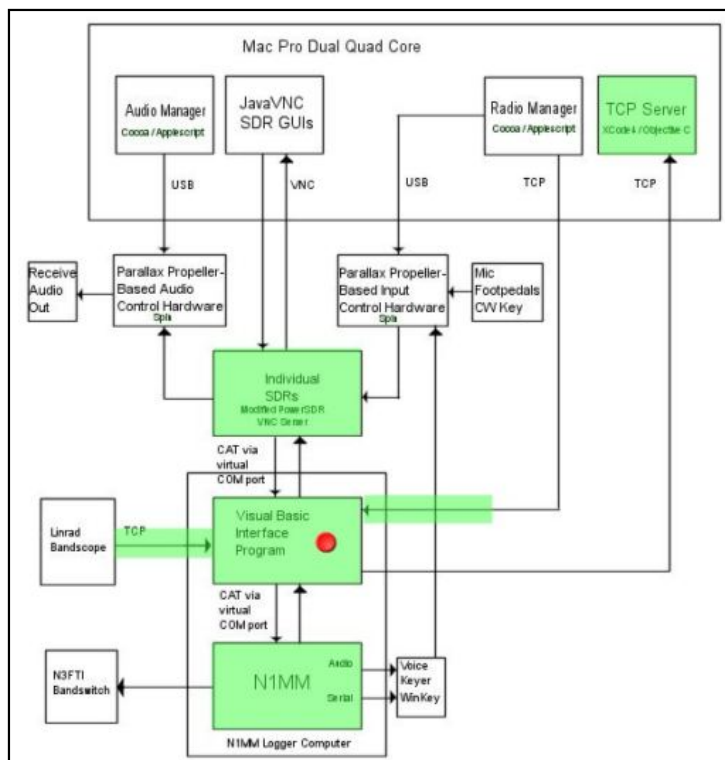
Contest Wrap UP Meeting



“What’s all this Multiple Bandscope Stuff, Anyhow?” (Part 3)

By Roger Rehr, W3SZ

The logging computer uses the Windows XP operating system, and it runs N1MM and a Visual Basic application that I wrote which acts as an intermediary between N1MM, the Mac Pro, and the 6 instances of PowerSDR running on individual computers. The Visual Basic program receives band information from the Mac Pro and sends it to N1MM. It receives CAT information from all the radios and sends the information from the appropriate radio to N1MM. It also sends CAT information from N1MM to the appropriate radio. It also sends band information from N1MM to the Mac Pro. Finally, it receives frequency information from Linrad and sends it to the appropriate radio. The **diagram below** shows the **central role** of this Visual Basic intermediary application.



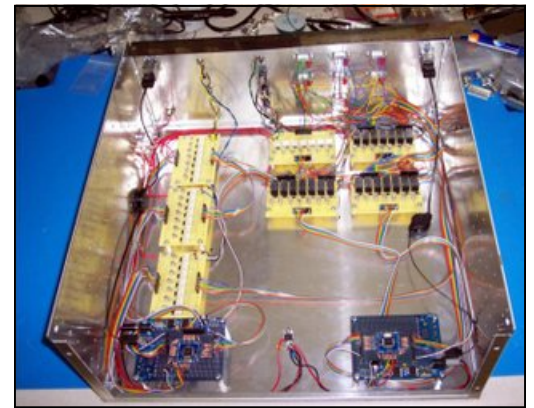
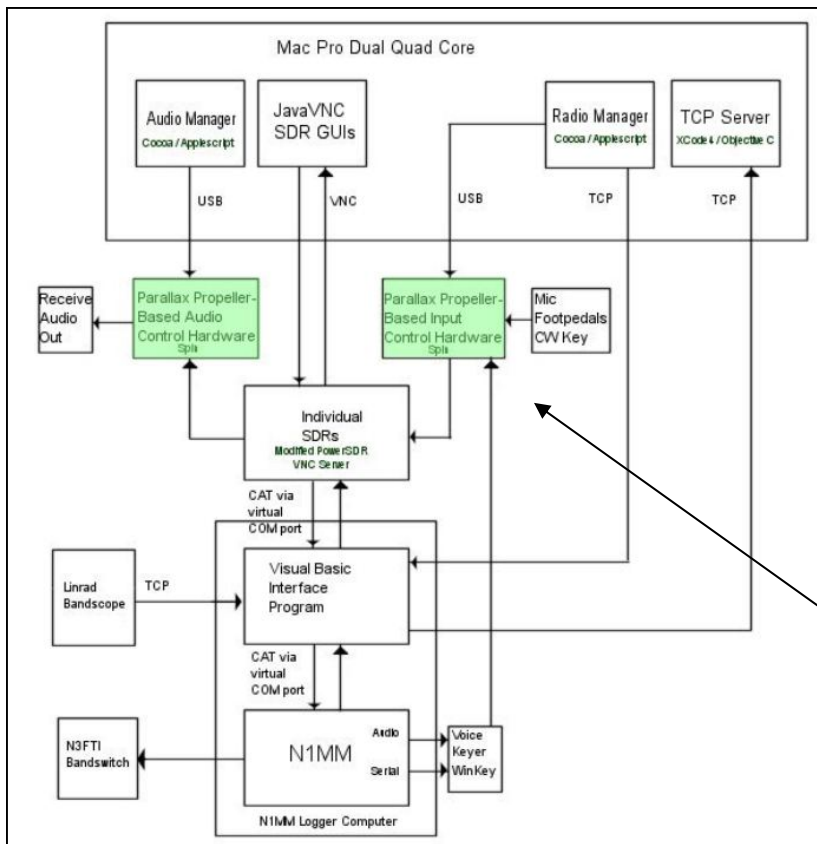
The logging computer also controls the antenna rotor via N1MM logger and a serial port and runs Win-Grid to serve as a check on the headings supplied by N1MM.

Six instances of com0com, a virtual TCP serial port program, and one instance of hub4com, a virtual com port aggregator, provide virtual serial port connections across the network from the N1MM computer to the instances of PowerSDR running on each of the SDR computers.

The homebrew SDR Controller is connected via USB to the Mac Pro. This controller uses 2 Parallax Propeller Proto Board USBs to control the automatic switching of the microphone, footswitches, key/keyer, and receive audio to the appropriate radio for the band desired. The two Propeller Boards use their own custom “Spin” applications to control switching of these devices. The code for these programs which I

wrote is also on my website.

The diagram on the next page shows the position of the hardware controller in the system.



This photo shows the homebrew SDR controller taken before the top was installed

Highlighted in green is the Propeller board Controller, described on the previous page

For six meters, a **Flex5000** is used as the SDR, and an **Elecraft 28/50 MHz** transverter is used to get the signal to six meters. For two meters, a K3 is used as the radio, with an HPSDR running as its bandscope and CAT controller, and a **DownEast Microwave 28/144 MHz** transverter to get the signal up to two meters.

For the remaining bands, HPSDR radios are used, with one HPSDR per band except for 903 MHz/2/3/5/10/24 GHz which share one HPSDR radio. The bands 222, 432, and 1296 MHz each have a dedicated DownEast Microwave transverter attached to the HPSDR radio. The transverters for 903 MHz and 2.3 GHz and higher all share a single HPSDR radio, with switching among the transverters being done automatically as described elsewhere in this article. Except for 10 and 24 GHz, all of these transverters are **DownEast Microwave** as well. **Kuhne** transverters are used on 10 and 24 GHz.

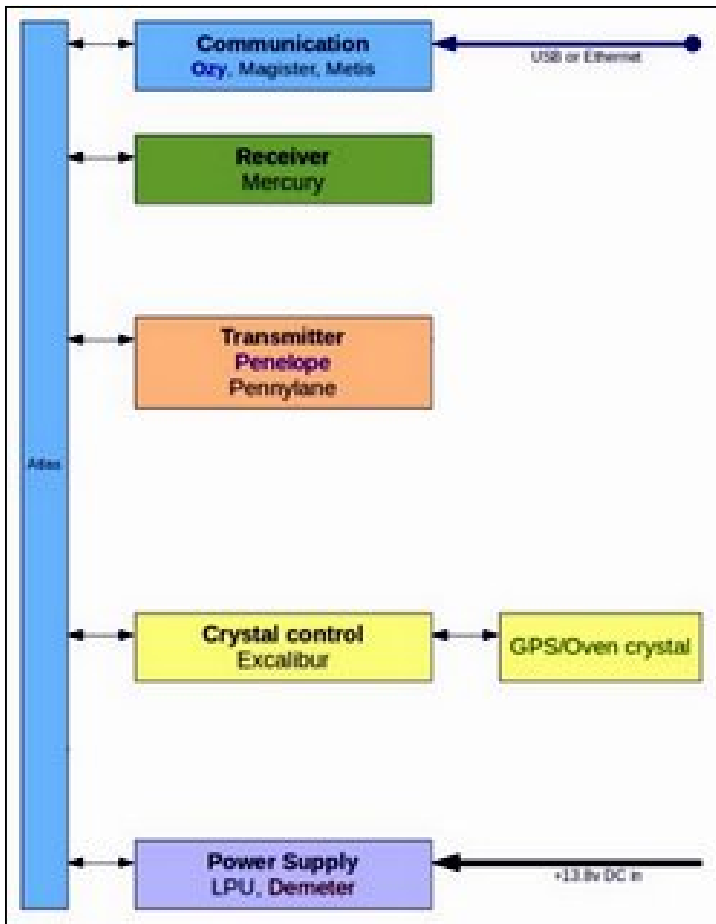
A homebrew lockout device to prevent simultaneous transmitting and bandswitching also uses a Parallax Propeller Proto Board USB.

An N3FTI Bandswitch is used for band switching transverters and associated hardware for 903 MHz, and for 2.3 GHz and higher bands. This is automatically controlled by the HPSDR / PowerSDR combination used for those bands. Manual bandswitching is **NEVER** needed.

The choice of bandscope that I made was deliberate. The first requirement, because “the **Bandscope is the Radio**”, was that the bandscope radio chosen needed to be a transceiver; a receive-only device was unacceptable. Using receive-only hardware was a “been-there, done-that long ago and not good enough” choice. I wanted to have at least 192 kHz bandscope width. That limited my choices at that time to the Flex 5000 and the HPSDR radios. The cost of 6 Flex 5000s was daunting and the less expensive HPSDR radios were a more practical choice. I already had a

Flex5000, and so I chose to use that on six meters. When I started out building this station, I wanted a bullet-proof receiver for 144 MHz with wide dynamic range, superb sensitivity, and excellent large signal handling capability. Thus I decided to use the K3 on two meters, but I coupled it to an HPSDR radio used as its bandscope. This combination has worked very well for me. For 222 MHz and up, HPSDR radios were used exclusively.

HPSDR is an acronym for “High Performance Software Defined Radio.” It is a modular system of radios designed by a group of enthusiasts. **TAPR** has provided initial funding to get the prototypes designed and then sells the individual units. The HPSDR consists of an Atlas backplane, to which various boards can be added. I use a combination of the Penelope DUC (Direct Up Conversion) transmitter, the Mercury DDC (Direct Down Conversion) receiver, the Excalibur GPS-locked 10 MHz frequency standard, and either the Ozy (USB) or Metis (Ethernet) Boards to connect with the SDR computer.



Once I started using the HPSDR radios, it turned out that the FFT size of the stock PowerSDR software [used on both the Flex 5000 and the HPSDR radios] was too small to give optimal bandscope sensitivity. I ran Linrad in parallel with PowerSDR and discovered that I could easily see signals on the Linrad bandscope that were invisible on the PowerSDR bandscope. But once I tuned the PowerSDR radio to the Linrad bandscope frequency, the signals were Q5! So I **modified the PowerSDR radio** to permit larger FFT sizes, and found that PowerSDR was then able to see the weak signals too. **If you don't look for very weak signals running Linrad in parallel with PowerSDR you will never know what you are missing!** My homebrew-modified version of PowerSDR allows me to select any FFT size [in powers of 2] between 4096 and 262144.

Here is a diagram of the HPSDR components tied together on the Atlas BUS. Many technical details of the components and photos of the individual boards can be accessed starting at http://www.tapr.org/hpsdr_index.html

To summarize the main points of this article:

- One bandscope is good.
- Multiple Bandscope are better.
- The best result is achieved when “The Radio is the Bandscope.”
- Automatic bandswitching and automatic switching of Mic, CW key, footswitches, receive audio, and the logging band is essential.
- Full integration of the radios and the logging software is required.
- A large FFT size is required to maintain bandscope sensitivity.

Additional information on these items, more photos, as well as software sources and schematics for the hardware, are on my webpage at: <http://www.nitehawk.com/w3sz/osxhpsdrserver.htm>

Other items of interest related to this project that are available on the website include:

Software Sources for the applications mentioned above:

Custom Spin application for the RadioManager Propeller Board:

<http://www.nitehawk.com/w3sz/RadioManager.spin>

Custom Spin application for the AudioManager Propeller Board:

<http://www.nitehawk.com/w3sz/AudioController.spin>

The RadioManager application that runs on the Mac Pro:

http://www.nitehawk.com/w3sz/New_Radio_ManagerAppDelegate.applescript

The AudioController application that runs on the Mac Pro:

http://www.nitehawk.com/w3sz/Audio_ControllerAppDelegate.applescript

The TCP server program that runs on the Mac Pro and receives information from N1MM:

<http://www.nitehawk.com/w3sz/W3SZOSXTCPServer.txt>

The TCP client program that runs on the N1MM computer and communicates with the Mac Pro: <http://www.nitehawk.com/w3sz/tcpclient.c>

The Visual Basic program that runs on the N1MM computer and communicates with N1MM Logger and the Mac Pro: <http://www.nitehawk.com/w3sz/N1MMNewHPSDRRigControl.txt>

The web pages describing the HPSDR radios can be found at: <http://openhpsdr.org/>

Some of the HPSDR components are available for sale by TAPR:

http://www.tapr.org/hpsdr_index.html

Apache Labs, in India, sells Hermes, the new HPSDR transceiver, and some other items:

<http://www.apache-labs.com/>

If you have questions please feel free to contact me via email: w3sz@arrl.net

I hope you have been inspired to at least start on the path to a Multiple Bandscope station. I know it will be worth the effort!

73, Roger Rehr W3SZ

39th ANNUAL EASTERN VHF/UHF/ MICROWAVE CONFERENCE

Fri./Sat./Sun. April 26-27-28, 2013 at the BAYMONT INN & SUITES, 20 TAYLOR ST., MANCHESTER, CT 06042 (just a few miles northeast of Hartford, CT off I-84)

CONFERENCE REGISTRATION will be available soon at: www.newsvhf.com. The 3 day conference pre-registration is \$25 which includes a super Friday night hospitality suite & indoor table swap starting at 7pm, Saturday all day conference presentations, auctions, indoor vendors, and concurrent Laboratory test sessions conducted by Greg Bonaguide from Rhode & Schwartz, and the Sunday morning outdoor flea market and a copy of the CD of Conference Proceedings including additional VHF+ papers.

Registration.....\$25 in advance, \$30 at door

Newcomers Special Registration.....for those who have NOT been to any VHF+ Conference before.....\$10 in advance, \$15 at door

Saturday night Banquet.....(tentative \$28)

On-line registration will be open very soon!!

Special Discounted Rates!!!! Double \$69.00, Suites \$99.00 ----Available to reserve soon!
The suites are really SUPER and sure to sell out soon, (your YL will approve!)

Hotel has **FREE continental breakfast & FREE WiFi**---check out TripAdvisor great reviews!!

Friday, April 26 -- 7pm.....Super Indoor Hospitality & Indoor Swap

Saturday, April 27 -- 8am-Noon....Talks, Auctions, Test Lab, Indoor Vendors

 Noon-1pm..... Lunch on your own--plenty of nearby great eating spots!!
 (Rein's NY Style Deli, and others)

 1pm-5pm.... Talks, Auctions, Test Lab, Indoor Vendors

 7pm.....Banquet, Speaker & Door Prize Give-a-way

Sunday, April 28 -- 8am.....Tailgate in parking lot

Sponsored by: North East Weak Signal Group (NEWS)

Questions? Contact K1MAP, WZ1V, W1GHZ, or N1JFU

or Email to: map1@mapinternet.com

Check: www.newsvhf.com for updates--MORE TO COME!

If you interested in presenting a talk or preparing a paper for inclusion in the Conference Proceedings please contact Paul Wade, W1GHZ Conference Co-Chairman.

The Wayback Machine

Gleaned from the pages of
Cheese Bits, February 1963
(Vol. V Nr. 11)

(Authors comments in *italics*)

- Helen's cover page illustrations: Valentine Cupid, Lincoln & Washington (*Feb birthdays!*)
- Column on 6-meter activity (by "Snooper Rat") included note of VP7CX being worked by a number of Rats. A mysterious, broad-band (1/2 Mc wide) noise source showing up in the band at 50.4 Mc. Members' thoughts invited.
- Snooper also reported on a 13-alarm fire in Philadelphia that destroyed 1 building and 30 homes. He berates the Ham community for not being prepared to help with emergency communications (*but we are now!*).
- Joe, W2EIF (the club Scribe) received many requests for Packrat certificates (for working 30 Packrats in the Jan contest). He reports "printer's cramp" from trying to complete them expeditiously. (*This was a way of encouraging folks to work the rats in the contest. Another idea worth resurrecting?*)
- Kentucky Ham radio "Bluegrass Awards" requirements listed. These provided certificates for working various numbers of Kentucky Hams. (*Certificate hunting was quite the vogue in 1963, and was used to encourage a*

variety of Ham activities).

- Another QSL delivery service (Continental QSL Club) announced. Intended to supplement the DX QSL Bureau, they will concentrate on domestic QSL deliveries with emphasis on up-to-date addresses. \$3.00 annual membership (*does anyone still send QSL cards?*)
- Three Packrats (W3SAO, W3CKP and W2UZN) are pictured on the VHF Amateur (*a now defunct VHF publication*) cover, to promote their one-day VHF contest in March. This picture was from the June 61 QSO party, and was previously published in the Evening Bulletin (*SK!*) and Cheese Bits.
- K3IPM appointed chairman of the club June QSO party effort. (*Stan still going strong in the contests, 50 yrs later.*)
- Ladies Night announced. Southwark Athletic Club. Tickets \$5.00, meal planned is Roast Beef. (*Compare to this year's price!*)
- Highlights of the "Crying Towel meeting" in January. K3EOD had TVI. K3GOZ had TVI. W3FSC fell asleep Sunday evening, and fell out of his chair! K3IPM took a trailer to Bowman's Hill, got stuck in the snow, had a Jeep pull him up, and had his antenna blow down. His XYL spent 26-hrs in the trailer with him (*Stan is still "trailing it"*). W3CXU – Prop Pitch rotor froze. K3EPB had TVI (neighbor's record player!). W3CFS

used 20' ladder to repair his rotor. W3GLI had high noise level, traced to a hot-house pump. W2AXU used SSB for his first time in contest, with good results (*AM had been king*). (*So, today's problems are nothing new*).

- A lengthy article explaining SOLAR Flares and their effect on radio communications was copied from the "Ask Andy" column in The Evening Bulletin.
- Launch of the "Syncom" satellite announced for February. Joining Telstar and Relay, Syncom will be placed in a synchronous orbit as an experiment. (*The forerunner of today's synchronous communications satellites that we take for granted!*).
- Oscar III launch planned, "sometime in May".
- A schematic for a 3-tube 220-Mc transmitter provided technical content for this issue. Designed by member W3NSI (*Craftsman extraordinary*). Lynn offered the tube complement at no charge to club member builders
- A copy of an International Crystal petition to the FCC was included. The key aspect of the petition was a request for a "no code" license, to be designated as a Hobby License with limited operating privileges. (*The forerunner of today's no-code licenses?*)

(As in previous editions, many "folksy" comments about members, their families, and activities were included in this Cheese Bits. If interested, visit

www.W3CCX.COM and read the full issue posted there).



thirty, de K3IUV

Events

For inclusion, please direct event notices to the editor.

38th Annual Trenton Computer Festival - March 16, 2013 Talks, Forums and Flea Market at The College of New Jersey. For details see <https://www.tcf-nj.org>. Details to follow.

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.

39th Annual VHF/UHF/Microwave Conference— April 26-28, 2013. Baymont Inn, Manchester CT. <http://www.newsvhf.com/vhfconf.html> or p.12 for further info.

April VHF/UHF Sprints: Dates Pending

Warminster Amateur Radio Club - Hamfest May 5, 2013. Middletown Grange Fair Grounds, 576 Penns Park Rd., Wrightstown (Bucks Co.) PA. \$5 per person (unlicensed spouses & kids under 13 free). Huge indoor facilities with electric available at all tables. VE testing / WAS field checking / Equipment check out table. See www.k3dn.org/hamfest.htm for additional details

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

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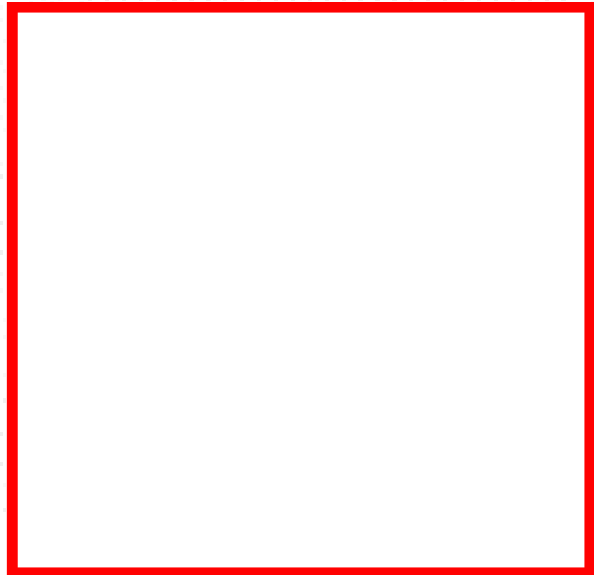
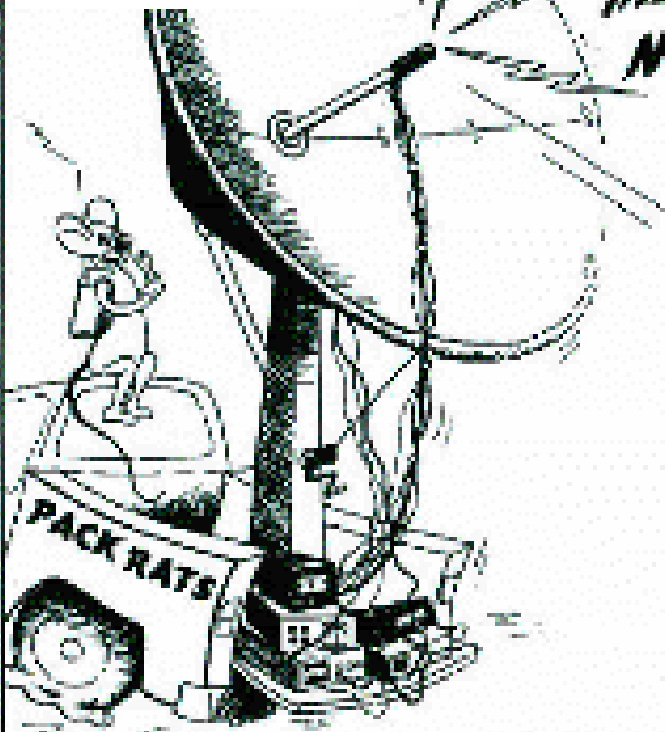
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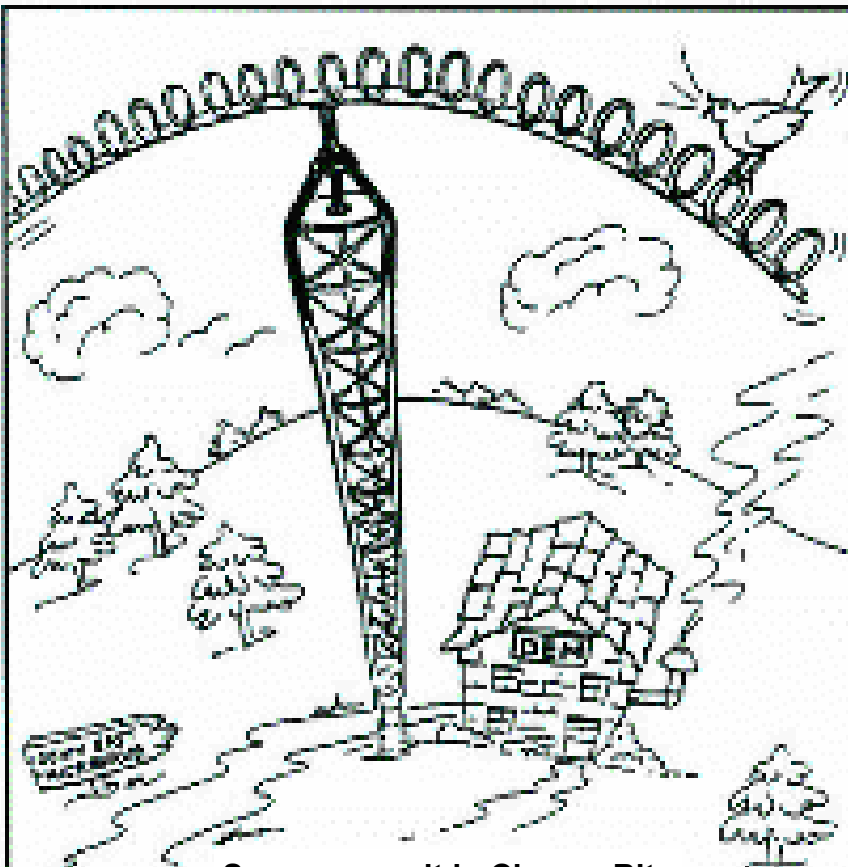
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