



CHEESE BITS

Happy
New
Year

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume XLV

January 2003

Number 1

Prez Sez

I hope your holiday events went well . Mary Lou and I had a large gang of relatives over for the feast of all feasts. Now the January contest is right around the corner, we should be checking all of our equipment and checking into the Monday night nets. We need your participation now more than ever if we are going to beat the competition. I will see you on the air. **73 Brian N3EXA**

The Ham Radio Almanac January 2003 Weather Forecast

After a five year span of damp cold weather that peaked on the second full weekend in January, this year's forecast is for bright sunny skies, low humidity, with a dominating high pressure system and mild temperatures. A sure sign of this warm winter window is the number of lightly-clad packrats now ascending their towers to maximize their ERP. Keep an eye in all directions for great propagation, and a touch of Au!

2003 January Contest

It is once again time for the club to compete for the most coveted award, the January Sweepstakes Unlimited top spot! It is a time for all members to participate in any way they can. We have for many years enjoyed supremacy and the honors that come along with winning this award.

Last year we had a wake up call. The Rochester VHF Group (*see related reprint p5*) beat us in overall points but did not have enough logs for the unlimited category. Many in the club consider this a defeat. I think it is just a wake up call. We cannot let this happen this year! It will not happen on my watch!

All the members old and new need to participate in this contest to the best of their abilities. Some of the older members myself included put in poor performances last year. This year we must dig deep from within and attempt to break all of our previous personal goals. Those high scores are now a thing of the past, and this is the present. There are many up and coming newer members, which one of them will be our next superstar?

The up and coming need everyone in the club to participate. Actually we all will benefit from active participation. This was and still is a hotbed of microwave activity. I encourage everyone to get that new band working or fix the ones that used to work that are now in disarray. I often miss working many members of the club in the heat of the contest. We need to take advantage of 222 FM for co-ordination and missed stations. Having a good 222 FM station is very important and often overlooked.

There will be a good number of Rovers operating this year. It is very important to balance ones operating habits between knowing when a rover will be in a new grid and what frequency they will be operating from. It is also important to not be so consumed with one rover that your score suffers from wasting too much time trying to locate the rover. There will also be a good group of multi-operator stations on the air. They are also important to work because many are now well equipped for long haul microwave contacts.

To wrap it up let's show the ham radio world that the Packrats are not a dying club of old timers. We can cut the mustard and we will once again feel the glow of victory. Take care.

Bill Lentz AA2UK 2003 January Contest Chairman.

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222.98/224.58 MHz, Churchville, PA

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 HAMARAMA: WA3DRC
 VHF Conference: KB3XG 610-584-2489
 Awards Chairman WA3GFZ 215-884-3116

PACKRAT BEACONS - W3CCX/B

FM29w Philadelphia, PA
 50.080 144.284 222.065 432.295 903.071 1296.251 MHz
 2304.037 3456.220 5763.190 10,368.140 MHz (as of 3/1/01)

MONDAY NIGHT NETS

TIME	FREQUENCY	NET CONTROL
7:30 PM	50.150 MHz	WA3EHD/K3EOD
8:00 PM	144.150 MHz	N3ITT
8:30 PM	222.125 MHz	W2SJ/N3EXA
8:30 PM	224.58R MHz	W3GXB
9:00 PM	432.110 MHz	W3RJW FN20le
9:30 PM	1296.100 MHz	WA3NUF FN20le
10:00 PM	903.100 MHz	AA3GN FN20ig

THURSDAY NIGHT NETS (1st & 4th of the month)

9:30 PM 2304.100 MHz W3KJ, & go to 3.4G & up after FN20hg

From my Archives, Now WC2K

Editor's Column

Progress can only be made through changes, so expect
 Cheesebits changes in 2003. I'll be experimenting with some font
 and format changes, perhaps a reduction of the size of frequency
 of the info in the left hand column on this page, and even an at-
 tempt at getting more technical material—on a beg, borrow or
 shamelessly steal basis. There has been great feedback this
 year—the October issue was highly touted by many as the best of
 the year. Thanks to all contributors.

While we're on the subject, I am still hoping that most of
 the rest of the recipients of the postal Cheesebits will convert to
 PDF e-mail subscription this year. One-by-one, folks are letting
 me know—all you have to do is send me an email to confirm—
 you'll get the color version, in PDF format, at least three days be-
 fore the mailed copy. Save a tree, reduce club overhead, and help
 me save time in all the stapling, folding, labeling, and stamping.

rick1ds@hotmail.com

Going into the final VHF SS preparation—van inspection
 completed, checking the batteries, and one marine cell appears a
 bit weak. Measured the output of the inverter with the digital mer-
 ter—99 volts—of course it's a square wave—Battery was indicat-
 ing 12.22 V. The DC voltage in the rotor indicator is about 23.2
 volts and drops 1 volt when the rotor is activated. Installing the
 zeners in the rotor indicator boxes for stability, as one of my
 frustrations with the 5 & 10G dishes has been accurate pointing.
 Also picked up a car compass to assist in aligning the van at the
 rover locations. Hopefully this will ease the flow for contacts on
 those bands.

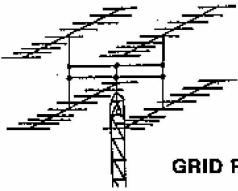
Regarding the value of the laser communicators last
 year, with the number of QSOs made, especially by the stations in
 the 100K point range, it added over 40K points to the cumulative
 club score. Doing some of the simple math, if a 100K station has
 1000 QSO points and 100 grids, and adds one laser QSO, an ad-
 ditional 8 point QSO multiplied by 100 equals 800 points, and the
 multiplier of 1 adds a thousand points—so just 1 Laser QSO is
 about an 1800 point addition to the 100K station. Make sure your
 9V laser batteries are live — they should be good if all you did
 was use them for contesting last year! This is an easy build for
 anyone, and I still have a few photocells and instructions available
 for those who are willing to add this capability.

I am including an abstract from the Rochester VHF
 Newsletter...they have a fleet of rovers. Last year NE3I did two
 grids with several bands, in addition to operating from home and a
 multi-op. All of this adds to the enjoyment, and certainly the score.
 Any one else planning to join the crew on the road?

Got my coax from the R. F. Connection—it arrived in 1
 day! The LMR400UF is low-loss, light-weight, and very flexible. I
 also ordered a few of those new N connectors that install like a
 PL-259, but I'm having some trouble getting all the center conduc-
 tors into the center pin—and I know I'm not the only ham having
 this problem!! Suggestions welcomed.

Team captains are the key to activating your team mem-
 bers in the most effective way. Any stories on what you did to
 pump the team and the resultant scores will be good reading in
 the next issue—let's hear about it.

Hats off to W3ZZ, in his maiden column this past month
 in QST. I echo his sentiments regarding Elmering. Although we
 have always considered ourselves a sub-specialty group, there
 are ways that each of us can encourage those to take steps to get
 another ham on a band above 10 meters for the contests. I am
 personally after a local friend who let me know he was a ham and
 bought a new Yaesu FT817, but really hasn't used it! Do you
 know a ham in another club or in the neighborhood who would be
 willing to use one of your spare FM rigs to make a few QSOs?
 Talk to them now and get them set-up! **73, Rick, K1DS**



RICK CONNOR
WB2NPE

GRID FM 29 BURLINGTON COUNTY U.S.A.
RR3 BOX 107 CARRANZARD TABERNACLE, NJ 08088

STATION	DATE	UTC	FREQ	RST	MODE
K1DS	3/15/01	1345	1296	579	CW

EQUIPMENT *THANKS FOR NEW STATE AND GRID, FINALLY CAUGHT YOU. SEE ME NEXT TIME, RICK. 25 WATTS - PAIR 45EL 100P HAM!*

PSE QSL TNX 73

Important Dates and Events

Saturday, January 4th	Microwave Activity Day, 6AM-1PM	432 and up, coordinate on 144.260
Monday, January 6th	Microwave Activity Eve, 7PM-11PM	432 and up, coordinate on 144.260
Mondays, Jan 6, 13, 20, 27	Packrat Nets, starting at 7:30PM on 50.150, up 1 band each 30 mins. see p2 for details	
Thursday, January 9	Packrat Board of Directors meeting	8 PM Check email for QTH (W3KKN QTH)
Thursday, January 16	Packrat Monthly meeting	8 PM Ben, WA3RLT will show a computerized contest analysis Guests invited Southampton Free Library, 947 Street Road, Southampton, PA 18966



Saturday & Sunday, January 18 & 19

VHF SS

**Starts at 19:00 UTC (2PM EST) Sat, Jan 18
ends 04:00 UTC Mon Jan 20 (11PM EST Sun)**

Saturday, February 1	Microwave Activity Day, 6AM-1PM	432 and up, coordinate on 144.260
Monday, February 3	Microwave Activity Eve, 7PM-11PM	432 and up, coordinate on 144.260
Mondays, Feb 3, 10, 17, 23	Packrat Nets, starting at 7:30PM on 50.150, up 1 band each 30 mins. see p2 for details	
Thursday, February 13	Packrat Board of Directors meeting	8 PM Check email for QTH
Thursday, February 20	Packrat Monthly meeting	8 PM

“The Cryin’ Towel”

Your favorite contest tales of woe

Guests invited

**Southampton Free Library
947 Street Road
Southampton, PA 18966**



Are you interested in the 76GHz band?

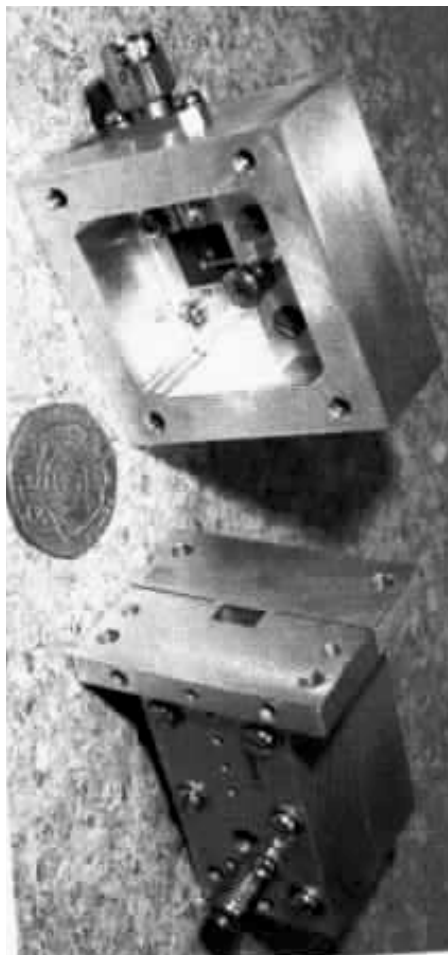
(reprinted from the RSGB Microwave Newsletter Nov-Dec02)

...But the size of the diode and the problems of mounting it put you off ...Also the problem of obtaining sufficient power at 38GHz to drive the mixer...To try and encourage more activity on the band and help with getting the above problems sorted I am looking for amateurs who would be interested in the following package:

- 1) DB6NT Mixer PCB fastened into a milled enclosure with the diode mounted and SMA connectors for the LO input and the IF connection. Size approx 45x45x22mm
- 2) 2) X 3 multiplier module to give 38GHz (@ 10mW output) when driven with 12.6GHz (@ 40mW input)
- 3) Not all of the work is done for you – you will have to make a transition from the rectangular face of the X3 unit to SMA to feed into the mixer and construct your own IF strip (DB6NT)

At this moment in time I am looking for numbers who are interested in this project to contact me – numbers are limited so first come first served. When these are known, costing will be worked out and passed onto interested parties.

You are not required to send any monies yet as the big unknown is the cost of the machining this depends on the quantities required. This is a once only project when we have reached the limit that's it. Interested Amateurs can contact me (Martin Farmer) either by post (QTHR) or Email at : g7mrf@compuserve.com



These are pictures of the above described modules as copied from the recent issue of the RSGB Microwave Newsletter.

Grote Reber, Who Built First Radio Telescope for Astronomy, Dies at 90

By ANAHAD O'CONNOR

(via the wsvhf reflector)

Grote Reber, a pioneering radio astronomer who built the first substantial radio telescope dedicated to astronomy and put it in his backyard in Wheaton, Ill., died on Friday in Tasmania, Australia, his home for some 50 years. He was 90.

Mr. Reber was an engineering student in 1931 when Karl Jansky of Bell Telephone Laboratories, using a large antenna system, made his famous discovery of cosmic radio waves emanating from beyond the solar system.

Mr. Jansky's results received little attention from other scientists at the time, but Mr. Reber, who was also a ham radio operator, set out to determine whether the waves were coming only from the galaxy or from other celestial objects.

In 1937, using about a half-year's worth of salary he had saved from jobs at various radio manufacturers, Mr. Reber erected his telescope. But much like Mr. Jansky's accomplishment, Mr. Reber's invention went relatively unnoticed, garnering the attention only of his puzzled neighbors.

"Jansky's discovery that the galaxy was giving off radio waves was considered such a strange finding at the time that no one appreciated it or followed up on it, except for Reber," said Dr. Woodruff Sullivan, an astronomer and a historian of science at the University of Washington. "The two of them were the pioneers of radio astronomy," Dr. Sullivan said. "Before Reber, there was no radio astronomy – just 'astronomy' because people only used optical telescopes."

Mr. Reber based his design for the telescope on a simple optical mirror, but on a much larger scale. A curved, or parabolic, dish was used to focus a wide range of radio frequencies. Made of sheet metal, the dish had a diameter of 31.4 feet and could focus radio waves to a point 20 feet above it. A radio receiver that could amplify faint cosmic signals by a factor of several million was attached to the telescope, making the waves strong enough to be recorded and charted.

After two years of developing and testing receivers and roaming the sky with his telescope nightly, Mr. Reber published "Cosmic Static," a series of articles in The Astrophysical Journal that many scientists today use to mark the birth of intentional radio astronomy. In 1944, he created the first contour radio map of the sky, with brighter areas indicating richer radio sources, the brightest being the center of the Milky Way. Mr. Reber made increasingly detailed measurements and published them over the years in many prestigious journals, like Nature and The Journal of Geophysical Research. The results of his surveys helped establish radio astronomy as a major field after World War II and his seminal radio telescope paved the way for the landmark discoveries of quasars, pulsars and the remnant glow left over from the Big Bang. Mr. Reber went on to receive a number of major awards usually reserved for professional astronomers, including the American Astronomical Society's highest honor in 1962 and several lectureships.

Grote Reber was born in Chicago in 1911 and earned his bachelor's degree from the Armour Institute of Technology, now the Illinois Institute of Technology. He worked for the National Bureau of Standards in the late 1940's, before leaving for Hawaii and, ultimately, Tasmania to study the cosmos through holes in the layer of charged particles, or ionosphere, in the earth's atmosphere.

Mr. Reber's original radio telescope is on display at the National Radio Astronomy Observatory's site in Green Bank, W. Va., alongside a full-scale replica of Mr. Jansky's antenna.

Best wishes for 2003 es 73 Rein W6/PA0ZN

**Reprinted from the VHF Journal
The Rochester VHF Group
December 2002-V53 #12**

What Is It Going To Take?

**Jim Howard, N2JMH,
RVHFG Contest Chairman**

With just less than two months until the contest and only small signs of enthusiasm, I wonder what everyone's state of preparation is. Maybe everyone is ready or maybe just not interested. Regardless of your level of excitement, time is running out. The weather will not cooperate for you much longer and with snow for turkey day it will only get worse from here on out.

Hopefully, by now you have most of the outside work done. This is an optimistic statement if I have ever heard one, but you should be ready to tackle some of the inside chores. Find one problem that really annoyed you last time and fix it. Such a general statement, but I am sure you have something that can be improved. Possibly your band switching techniques or the fact that you are sharing one set of headphones for two radios, anything that takes a step out of moving through the bands will save you energy for when it gets hectic on Sunday evening.

If we are to topple the Rats again this year we all need to take advantage of what makes our little club do so well in January. First thing is the FM contacts available to us. You should have at least 2 meters and 70 cm with a vertical antenna available. Ideally, you want to have the lower 4 bands. I always used my 6-meter horizontal beam on 6 fm when I contested at home. SWR was usually terrible so take caution but the point is that I never let a contact get away. I also encourage you to seek out all your FM-only friends before the contest, explain why this is important to us, and ask them to join in. You never know where you might find another weak signal contester.

Rovers, rovers, rovers. If you have not figured out the importance of these guys then you missed the boat. I cannot stress this enough: you must find the rovers and work them on all bands in all grids. Check last years log and figure out who your most missed rover was and why. What do you need to do to assure that you do not miss them this year? Here are a few suggestions to increase your chances in order of importance. Get on Beacon net, n2jmh/r tested and approved. Print out all the rover schedules and hang them up near your operating position. Call CQ on 2 meters, you might work some other stuff in the process. This one is OK with me, others might not agree, but if you hear me working another station, either give your call over top of the other station I am working or squeeze in with your call right after I un-key. I will acknowledge you, then have patience for your turn. Also attempt to tag along as a rover moves one station through the bands. Not that I have any personal prejudice on this, but as far as I am concerned the rover calls the shots. If the rover wants you to go to 144.299.5 then you should go. If I ask you to go somewhere it is usually for a reason, local QRM, others waiting or I am testing your ability to spin the VFO, because I already turned mine while you were questioning me.

Here are some of my personal operating techniques that I have found to be somewhat successful. Point your antennas north once in a while. Did you know that there are stations active in FN15, 05, 14, 04, 25, 24, EN95, 94 and EN93. Use Lake Ontario as an advantage, no, not for lake effect snow, but for line of sight to the north shore, eh.

Co-operate on the local 2-meter FM frequencies. I know most can not figure out how to unlock their VFO from 146.55, but there are other frequencies available. Try 146.58, 146.49 or if you

are real brave, go to 147.51, 147.54 or 147.58. The mayhem that takes place on 146.55 is exciting but not really productive. When a new station pops in there, let others work them too.

If you must miss some operating time from the contest be sure not to miss the most important times. The first few hours, after dinner on Saturday, Sunday morning and the last 5-6 hours of the contest are some of the busiest times. With the amount of rovers we will have out this year there should be NO slack times.

That is it for now, keep building and have fun!

My 2 Cents on Winter Roving

It's usually cold out there, we keep the engine running and the heater on. Snow and rain or ice can change the entire plan. Trips outside of the van are limited to checking the antenna positions on site arrival and departure, and the occasional nature call. We don't stay at a site too long, as we have a travel schedule to keep, so the activity is compressed into a short spurt, and hopefully we can work a group of folks on 6 or 2 and move everyone up simultaneously to the higher bands, especially those who have only the lower 4. We ask everyone if we can run the bands through our top-band limits from each stop. We try to use the same frequency decimal on each band for consistency. I usually ask the fixed station to call me on the microwaves, as antenna calibration from stop to stop is often inaccurate, and it's easier for me to find and peak on you. 30 second transmissions with 30 seconds of listening for up to 3 cycles is a good routine, and if nothing heard, go back to a coordinating frequency. 223.6 FM is a good coordination and calling frequency for rovers.

As it looks now, we'll be "local" in FN20 and FM29 on Saturday, then get an early start and try to drive up to FN31 Sunday AM, and work our way south to include FN30, FN21, FM29 again and then FM28. Options include further south into FM19 & 18, all depending on weather and band conditions. We will try to post all rover plans on the reflector. New for this year are dedicated rigs for 146.55 and 223.5 FM, with vertical whips.

We often are faced with visits from interested onlookers, rangers and police, and may miss some operating time and skeds. Our mobile computing may be a little cantankerous and misleading if we forget to input a new grid when we move. Have patience, and hope to work you many times on many bands.

73, Rick, K1DS and Leon N1XKT

Joel Knoblock W3RFC

www.therfc.com

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VP5/N3FTI on 2m WSJT

QSL.NET/QTH.NET

Last year I was invited to operate with the crew of VP5A during the ARRL DX Phone Contest from the island of Providenciales in the Turks and Caicos island chain. I enjoy radio contesting, and have operated in many different contests, but I have never been on the DX end of a contest pile up, I jumped at the chance!

With only a couple of month to plan, I had hopes to bring some VHF gear to play with during the off contest time. Months turned into days and soon I was on the island without any VHF gear to speak of. Time on the island went quickly; we handed out over 9800 (give or take a few!) contacts during the contest and a few hundred during off contest times. Ten months later we were awarded with a first place world finish in the Multi-Multi DX Station Category.

We are coming up on this years ARRL DX Phone contest, and once again the VP5A team has requested my presents. During last years trip I learned many things that has persuaded me to take gear to work WSJT this year. First was that there is plenty of room on the roof mounted tripod tower for additional antennas. The tower is easily accessed from the sun roof of the shack! Second; there is a Cushcraft 144 MHz Boomer Yagi and a Astron 50A Power Supply (for my brick amp) in storage at the site! Third, I was up early every morning last year with nothing to do but work HF. Although HF is great fun, after awhile it is like shooting fish in a barrel! I would love the challenge of running meteor scatter schedules (or random) on 144 MHz along with handing out a rare grid for many! My travel plans are not in stone as of now, so I cannot give an accurate date for this operation, but it will be proceeding and following the 2002 ARRL DX Phone Contest (March 1-2 2003). As time gets closer I will post my schedule both here and on numerous internet reflectors.

If you are interested in working VP5/N3FTI while I am on the island, please contact me for scheduling. Last year we had internet access on the island, but it is a dial up connection and very expensive to use! More to come!

73 Steve, N3FTI (VP5/N3FTI)

Last night we had a nice tropo opening up and down the east coast. I was lucky enough to work a new weak signal enthusiast in semi-rare grid FM28 on 6, 2, and 432. It was Al, K3TKJ, founder of QSL.NET/QTH.NET. If you haven't yet donated, consider this my personal plea to support Al in his cause to continue providing the QSL.NET/QTH.NET free web and email servers for hams. It takes lots of cash flow to maintain this level of internet service, not to mention generosity, goodwill and time. So if you can spare \$10 or so, donation instructions follow: -73 es TNX, Ron WZ1V ---

****IMPORTANT**** As a user of the mailing lists at QTH.NET you understand the importance of good communications. We strive to have the best mailing list environment possible, no spam, no advertising and your complete privacy as a user. It is not easy doing it this way and believe me the temptation for commercials is always there. The major costs of running this system is bandwidth for access. This costs a lot of money every month. We are presently at a crisis point for funding. The events of 9/11, the stock market and the almost total lack of contributions has caused us to start spending our reserve funds. There is money left to continue QTH.NET for about another 2 months without your help. There are few bargains left in this world but I see this as one of them. Please contribute to the funding of this site. I suggest \$15, less than an ARRL membership, less than a nice dinner out with the family but so important to our future. The choice is yours. I can't continue without your help. If you care to contribute, please do it today.

By Credit Card <https://proxy.qsl.net/donation>
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 BidPay <http://www.bidpay.com> (account k3tkj@qsl.net)
 Donations by mail: QSL.NET
 34087 Old Hickory Road
 Laurel, Delaware 19956

Thanks in advance... Al K3TKJ

Web Pages & Bits

Universal reflack version is available for download. Both article and .pdf file are now at: <http://w3ref.cfn.ist.utl.pt/cupido> Anybody out there still needs a frequency configuration not covered by this scheme? Let me know. Luis Cupido CT1DMK (not only will you find this reflack resource, but also lots on microwave info, including a reprint of the 24G boards from the 1997-9 editions of Dubus—Ed)

After the September Contest there was quite a bit of discussion about rover operation and visitors. A few people were stopped by law enforcement, etc. The thread went on about the need for a handout. Well I have created one that everyone is free to use. It is designed as a tri-fold handout. I think it still needs some work but since I was about 90% satisfied I figured it was time to make it available. If I wait until I am 100% happy with it, no one will ever see it. It is only available in Microsoft Publisher format and Adobe Acrobat PDF files. Go to my new web site at <http://www.nr6ca.org> scroll down to PDF downloads and you can get it from there. The web site is brand new and still coming together so it is not that well organized or complete yet. I am looking for submissions for inclusion from anyone who has something that would be of interest to others. 73, Randy, NR6CA

(Randy was at the November meeting—it's great to see our long distance members in person. His web site is a treasure of collected practical and technical info that is sure to be a resource for many of you—I made a tri-fold for my rover—Ed)

SAT. 160 75 40 20 15 10 50 124 220 429 2304 1296

DELAWARE

THE FIRST STATE

KB3QM

From my Archives, Now W3OR


EX: WA1NGR WB2RVD WA3IZT KA3BCP WB4KJN

Ron Allen
 P.O. BOX 73 - BETHEL, DEL. 19931

SMIRK #801 SUSSEX CO. 10X #14106
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Contact Ron, W3OR w3or@bwave.com

Beacons

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Dave Meier N4MW New Kent, VA FM17kn http://www.n4mw.com



N6TEB/R



N6DN & N6VHF/R

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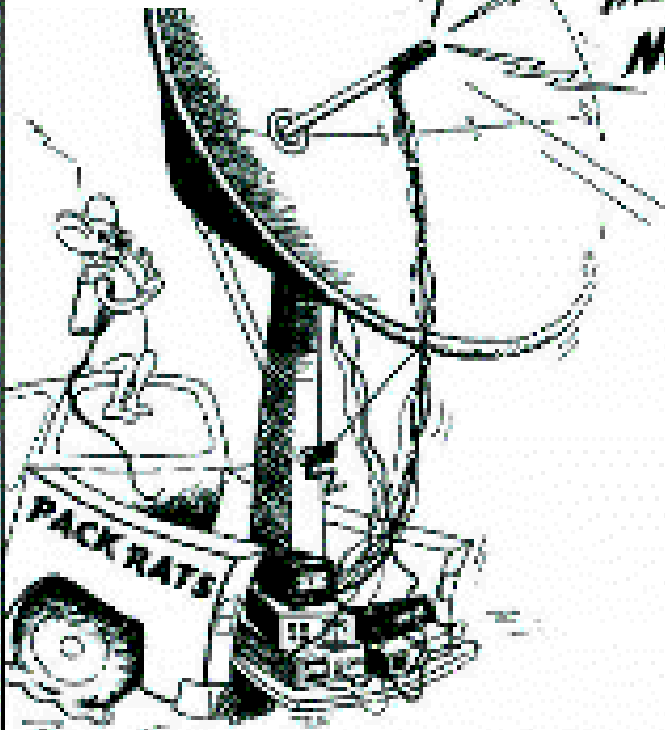
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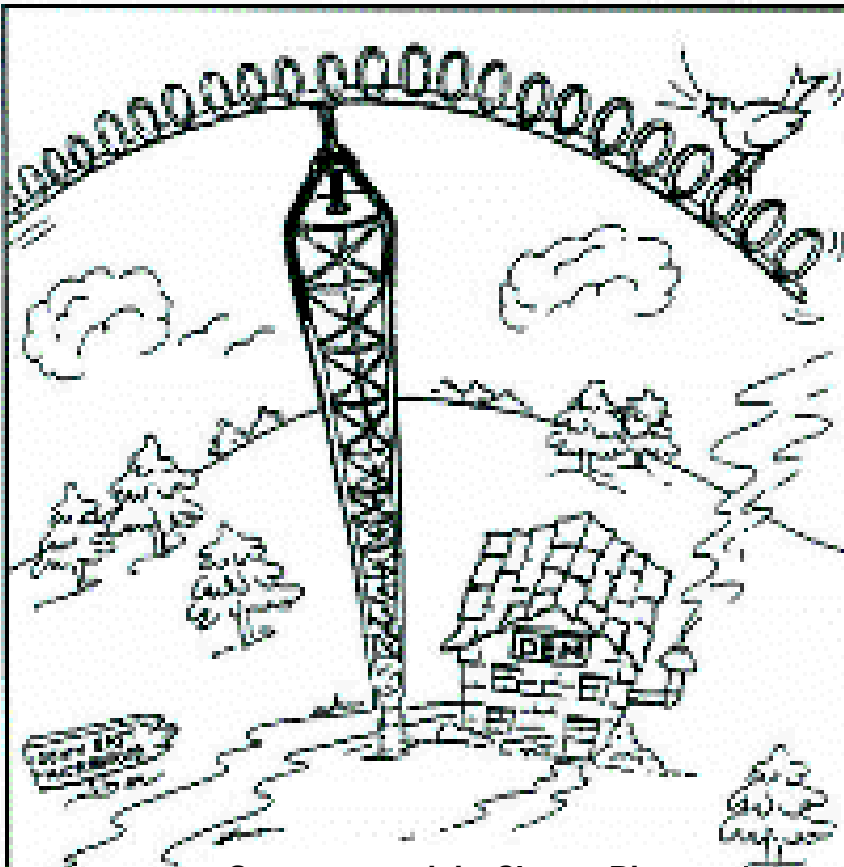
MEETING NOTICE



Saturday, January 4th Microwave Activity Day
Mondays, Jan 6, 13, 20, 27 Packrat Nets start at 7:30PM
Thursday, January 9 Packrat Board of Directors
Thursday, January 16 Packrat Monthly meeting
 "Contest Analysis"
Saturday & Sunday, January 18 & 19
VHF SS
Starts at 19:00 UTC (2PM EST) Sat, Jan 18
ends 04:00 UTC Mon Jan 20 (11PM EST Sun)
Thursday, February 13 Packrat Board of Directors
Thursday, February 20 Packrat Monthly meeting
 "The Cryin' Towel"

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