



# CHEESE BITS

W3CCX  
CLUB MEMORIAL CALL

ARRL  
Affiliated  
Club



Volume XLVII

November 2005

Number 11

## PREZ SEZ

I was delighted to have dinner with Linda KA1ZD and our ARRL CEO and secretary, Dave Sumner K1ZZ, and then hear about their exploits on 10GHz from all of those great New England mountaintops. I had flashbacks of the excitement that I experienced for the first time when I took my 150 milliwatt station to Mt. Wachussetts, and proceeded to work all around the region. I shared that mountaintop with the likes of W1FKF and W1GHZ among others. My first VUCC on 10GHz was worked from there, and since I have another 10 grids worked from Camelback. With the availability of excellent transverters from both DEMI and Kuhne, there is little excuse for not trying this fantastic band. Several of us have been active participants in the 10GHz weekends, and effectively use that band for other events and contesting. N2UO is the latest club member on that band, and has a lot of log to show for his efforts. There is plenty of technical help and field assistance if you're ready. Raise your hand!! Thanks to Bob, N4HY, who arranged this program, and to Joe, K1JT for hosting them.

Our next program is also an ARRL speaker, Joel Harrison, W5ZN. His QRZ listing includes the following: The W5ZN station is operational and active on all bands from 1.8 MHz to 24 GHz HF: 9 band DXCC; DXCC Honor Roll; DXCC Challenge; WAC; WAS; RTTY WAS DXCC: Mixed 341, CW 312, Phone 312, DX Challenge 1712 VHF/UHF/Microwave: 11 band VUCC - 50 MHz thru 24 GHz; 6 meter WAC WAS #961; 2 meter WAC WAS #123; VUCC: 50 MHz - 506 Grids 50 States 83 Countries; 144 MHz - 301 Grids 50 States 36 Countries; 222 MHz - 83 Grids 27 States 2 Countries; 432 MHz - 151 Grids 36 States 15 Countries;

;902 MHz - 43 Grids 15 States 1 Country; 1296 MHz - 51 Grids 16 States 1 Country; 2304 MHz - 32 Grids 12 States 1 Country; 3456 MHz - 22 Grids 10 States 1 Country; 5760 MHz - 26 Grids 10 States 3 Countries; 10 GHz - 20 Grids 10 States 1 Country; 24 GHz - 5 Grids 1 State 1 Country Satellite: WAC WAS #228 VUCC #8 ARRL June VHF Contest All Time World Record, Single Operator.

I know that this is going to be a special evening, not only because he is the ARRL First VP, but also because he is an avid VHF'er. My expectations are that this will be an SRO event, so plan to be there early and have dinner with Joel at Pippo's (let Joe Taylor know you are coming to Dutch treat dinner so proper reservations are made) and **bring a guest to the meeting.**

I have started to call my January team members to assess their needs and readiness for January's contest. Advanced planning and preparation are essential. We are also circulating two questionnaires: one related to January contesting and the other related to your active participation and thoughts about the future activities of the club. We are especially interested in your input about our June contesting, the Mid-Atlantic VHF Conference and Hamarama. Please make sure that you complete and return these surveys and questionnaires as quickly as possible to enable us to actively plan for the club's next fifty years (or at least the next five!).

Kudos to Leon, N1XKT, who completed the test element he needed to upgrade to General Class. He's looking for a rig to put in his vehicle. I am improving the rover with a 400W 2m amp, a 150W 903 amp, and a PAR stressed Moxon for 6m. I am also working on an improved January strategy to increase the rover score. All suggestions are useful—let me know yours! As we enter the holiday season, I send you my wishes for health, happiness and peace. 73, Rick K1DS

Pack Rats **CHEESE BITS** is a monthly publication of the  
**Mt. AIRY VHF RADIO CLUB, INC.** -Southampton, PA.  
 SUBSCRIPTION RATE: \$16.00 PER YEAR (USA)  
 \$20.00 PER YEAR (CANADA)  
 \$10 PDF only  
 \$24.00 PER YEAR (ELSEWHERE)

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**PACKRAT 222 MHz REPEATER - W3CCX/R**

222.98/224.58 MHz, Churchville, PA

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QUARTERMASTER: K3IUUV, Bert Soltoff, soltoff@uscom.com

**PACKRAT BEACONS - W3CCX/B**

FM29jw Philadelphia, PA

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

**MONDAY NIGHT NETS**

<u>TIME</u>	<u>FREQUENCY</u>	<u>NET CONTROL</u>
7:30 PM	50.145 MHz	K3EOD FM29II
8:00 PM	144.150 MHz	N3ITT FN20KI
8:30 PM	222.125 MHz	K3TUF FN10we
8:30 PM	224.58R MHz	W3GXB FN20jm
9:00 PM	432.110 MHz	WA3GFZ FN20kc
9:30 PM	1296.100 MHz	WA3NUF FN20le
10:00 PM	903.125 MHz	AA3GN FN20ig
10:30 PM	2304.085 MHz	W3KJ FN20hg

& go to 3.4G & up after

Visit the Mt. Airy VHF Radio Club at: <http://www.ij.net/packrats>

**Editor's Column**

*or Ramblings*

There certainly is a lot of diversity in Amateur Radio. Here I am trying to get a few watts up and operating on 903, 1296 and 2304; meanwhile there are hams out there setting new distance records and completing EME contacts on 47GHz, developing new software to allow the completion of contacts when the signals are way below the noise floor and stretching the limits of the atmosphere by trying to break distance records at 137 KHZ . Who know what new frontiers await.

We were impressed by the presentation by Dave and Linda Sumner and their very portable 10GHz low power station. For those of you who stayed home, we hope to see you for the visit of W5ZN also from the ARRL. For those of you who were traveling I hope yours and my schedules will find us in the neighborhood on Thursday evening for what promises to be another outstanding presentation.

I am please to see that a few more members have opted to receive the electronic version of CheeseBits. I am trying to reduce the photo image size without sacrificing the quality and so far the file size has been more manageable for those with out cable or DSL we thank you With the printing cost ever increasing and the Postal Service already looking at their fees with an eye toward upping the first class rate again. the cost of mailing to a single member is 65% of your full membership annual fee. The retired members are getting a reduced membership fee so we are actually supplementing their subscription. The rent and goodies money needs to come from somewhere and your electronic subscriptions help.

There are so many demands on everyone's time that I hope each of you will make it a point to attend the scheduled meeting and make a major effort to check in to the Monday evening nets. This is how you keep current on the activities.

With the current board of Officers we have continued to have many excellent and informative presentations.

During this Holiday season and with THANKSGIVING just around the corner I want to thank all of you for your support and encourage you to consider writing up a pet project or a unique radio experience for submission here in your newsletter CheeseBits. (Photos and schematics optional).

Get on the air and test your equipment regularly. I am looking forward to working everyone on at least 7 band in January.

Listen for the WEAK ONES

73

W3GAD Doc



## LF EXPERIMENTATION BY RADIO AMATEURS CONTINUES QUIETLY

Experimentation by radio amateurs in the nether regions of the radio spectrum continues quietly and largely unnoticed outside of the LF community. Since the FCC turned down the ARRL's 1998 petition to create an Amateur Radio "sliver band" in the vicinity of 136 kHz, some US amateur licensees have obtained FCC Part 5 Experimental licenses to research the possibilities of LF, including transatlantic and transpacific propagation. A few hams in Canada have obtained special permission from Industry Canada to operate on LF using Amateur Radio call signs. The latest noteworthy accomplishment was a 137 kHz QSO <<http://www.w1tag.com/XDWQSO.htm>> October 29 between US Experimental licensees Laurence Howell, KL1X--operating as WD2XDW--and John Andrews, W1TAG--operating as WD2XES.

"This is the second two-way between US Experimental licensees in that frequency range, the first being a 25-mile CW contact between K2ORS/WD2XGJ and myself last year," said Andrews. The QSO between Andrews, in Massachusetts, and Howell, in Oklahoma, spanned some 1340 miles.

In 2001, Larry Kayser, VA3LK (SK), and Laurie Mayhead, G3AQC, received a special Transatlantic Challenge plaque for completing the first two-way Amateur Radio LF contact between the UK and Canada earlier that year. Another plaque went to Dave Bowman, G0MRF, John Currie, VE1ZJ, and Jack Leahy, VE1ZZ, for completing a crossband (HF/LF) transatlantic QSO in 2000.

A year ago, New Zealand LFER Mike McAlevey, ZL4OL, copied Howell's WD2XDW 137 kHz carrier "bursts" over a path of more than 13,000 km (8000 miles), while Jim Moritz, M0BMU, copied LF signals from WD2XDW, Andrews' WD2XES and Joe Craig, VO1NA, in Newfoundland. Craig and Alan Melia, G3NYK, described their LF exploits and experiences in "The Transatlantic on 2200 Meters," in July 2005 QST <<http://www.arrl.org/qst/2005/07/craig.pdf>>.

More recently, the first confirmed transpacific reception of Canadian Amateur Radio LF signals occurred October 4 when the very slow speed (QRSS) CW signals of VA7LF were heard by ZM2E in New Zealand. "Signals from the ZM2E club station were heard in Canada as well, but propagation was not of sufficient duration to enable a QSO to be completed," said Steve McDonald, VE7SL, one of the VA7LF operators. ZM2E and UA0LE hold the current Amateur Radio two-way LF world record at a distance of 10,311 km (6393 mi). The distance between VA7LF and ZM2E is approximately 11,700 km (7254 mi).

LFers typically use very low data rates and process the incoming sound-card audio in real time using DSP software like WOLF or ARGO.

During the October 29 contact, which took more than two hours to complete, Andrews was running 200 W output into a large, tree-supported vertical loop. Howell was running 1 kW into a tree-supported vertical loop.

Experimentation under FCC Part 15 rules in the vicinity of 160 to 190 kHz has been going on for years by radio amateurs and non-amateurs alike. Amateur Radio licensees in Europe and elsewhere have an allocation at 135.7 to 137.8 kHz, and most Amateur Radio experimentation takes place in this band.

ARRL Newsletter Vol 24 No 44 N0AX editor

## ARRL 2005 FREQUENCY MEASURING TEST SET FOR NOVEMBER 17 UTC

Returning to the airwaves November 17 at 0245 UTC (Wednesday, November 16 in US time zones), the 2005 ARRL Frequency Measuring Test (FMT) once again will call on participants to measure the frequency of an audio tone modulating the carrier.

"Measuring the tone frequency, as opposed to that of the carrier, reinforces the understanding of the relationship between carrier frequency and the actual components of a transmitted signal," Engineer and ARRL Contributing Editor Ward Silver, N0AX, says in "Tune In the 2005 Frequency Measuring Test," in November QST (p 54), [www.arrl.org/w1aw/fmt/2005/05fmtilver.pdf](http://www.arrl.org/w1aw/fmt/2005/05fmtilver.pdf). "With the carrier largely suppressed for SSB signals, only the sideband components remain. A single modulating tone results in a single transmitted component." But, Silver notes, the frequency of the absent carrier is what the operator sees on the radio's display.

The FMT signals will emanate from Maxim Memorial Station W1AW this year on 160, 80 and 40 meters. The 20-meter transmission has been dropped for 2005 because of the generally poor conditions during evening hours on that band. The frequencies will be 1855, 3990 and 7290 kHz, and all transmissions will be on lower sideband (LSB). The FMT will replace the W1AW phone bulletin normally transmitted at 0245 UTC on November 17 (November 16 in US time zones).

Participants may utilize either direct or indirect techniques to determine the tone frequency. "Direct measurements assume a carrier frequency and measure the audio tone frequency directly," Silver explains. "Indirect measurements obtain the transmitted frequency of the tone component at RF, then compute the difference between the published carrier frequency and measured frequency."

Silver advises that since the W1AW exciters are independent units and not fed with a single local oscillator, participants can expect the measured tone frequency to differ slightly on each band.

The test itself will consist of three 60-second tone transmissions on each band, followed by a station identification. The whole test will run for about 15 minutes and will end with a station ID.

Submitted reports should include the participant's name, call sign and location plus the time of reception and the tone frequency. Those using an indirect measurement method should show how they calculated the tone frequency. Participants may submit separate reports for each band. A Certificate of Participation is available to all entrants.

Those coming closest to the measured frequency as determined by the ARRL Laboratory will be listed in the test report and will also receive special recognition on their certificate. Entries must be received via e-mail <[fmt@arrl.org](mailto:fmt@arrl.org)> or postmarked by December 16, 2005. Send hard-copy entries to W1AW/FMT, 225 Main St, Newington, CT 06111.

ARRL Newsletter Vol 24 No44 N0AX Editor

Hello All,

We have received a go to put the 40M dish at OVRO on 1296Mhz for both remaining weekends of the contest in October and November. We plan to be on shortly after local moonrise as long as possible both days of both weekends. We will be on CW and SSB. We will be using the club call of W6IFE from the San Bernardino Microwave Society.

We will issue bulletins on these reflectors as time gets closer and intend to have our own reflector up soon.

Doug K6JEY

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## NEED 903 FOR JANARY??

I have a homebrew 903 transverter for sale.

Unit was designed and built by Gary, WA2OMY.

28 MHz IF with separate transmit and receive ports.

Requires only 28 volts to run transverter. The transverter is interfaced with an approximate 40 watt amplifier with all antenna relays and switching included.

Transverter is mounted on a 5" standard 19" rack panel. The amplifier is mounted on a separate 7" standard 19" rack panel.

Taken out of service just before the June 2005 contest because I bought a YAESU 736 with a 903 transverter and amplifier in a package deal.

Price \$300.00 or best offer plus shipping from 08360

AL BOBLITT K3EOD  
(856) 690-1787  
1352 W. Chestnut Ave.  
Vineland, New Jersey  
08360

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For a list called 10 natural laws

LAW 1: You control your life by controlling your time.

## N2UO EME contest results and first ever MMCW QSO on 23 cm

Date: Tue, 25 Oct 2005 08:22:44 -0700 (PDT)

I had a great time operating 23 cm EME this weekend. I worked 29 stations. I also worked four initials including LA9NEA, W6IFE, OK1DFC and RW3BP; Sergei's is the smallest station I ever worked off the moon. He has a 2.4 m dish, linear polarization and 25 W. I have a 3 m dish and circular polarization. I cannot see him with Spectran at all. He sees a weak trace due to my higher power, but cannot copy anything by ear.

We used the MMCW Exchange software that Sergei and a friend developed for 47 GHz EME. It is a lot of fun to use it. We run 5 minute sequences, and we reduced the bandwidth to 25 Hz, at 12 wpm. The processing gain achieved by the signal averaging and the narrow bandwidth provides clear CW copy of signals that are so weak they do not even show up on Spectran. The receive audio is continuously fed to the computer speakers, but as time passes by, what you hear is the averaging of the previous transmission, so the signal "builds up" until it becomes readable. When Sergei sent for about 3 and a half minutes I started to copy my call, and at 4 and a half minutes I had complete calls. Morse knowledge is still required because the operator has to decode the information, like in a regular CW QSO.

The gain that can be achieved with this CW software is such that very small stations can also try CW EME on 23 cm or higher bands, where the coherence bandwidth is an issue. However, if a large station listens to the QSO, the operator will be able to copy the signals by ear (no computer needed), if the antenna gain is high enough. As I said, the transmission uses regular Morse code.

If anybody is willing to try this software, it can be downloaded from Darrel's web site at [www.ve1alq.com](http://www.ve1alq.com). It also has a simulator and an "echo" mode to check your own signal off the moon and perform system adjustments. I will be happy to set up a sked.

73, Marc N2UO

## PACKRAT JANUARY 2006 VHF CONTEST QUESTIONNAIRE

Are you interested in participating in the January 2006 VHF Sweepstakes contest on behalf of the Mt. Airy VHF Radio Club to be held the weekend of January 21- 23, 2006. YES \_\_\_\_\_ NO \_\_\_\_\_  
If YES, please respond to the questions below. If NO, please indicate WHY NOT (unless you are not going to be available on the contest weekend. Be Specific: \_\_\_\_\_  
\_\_\_\_\_

YOUR CALL \_\_\_\_\_ YOUR 6 DIGIT GRID SQUARE \_\_\_\_\_

What category will your station be entered?

SOLP \_\_\_\_\_ SOHP \_\_\_\_\_ Multi-op Limited (Bottom 4 bands) \_\_\_\_\_  
Multi-op Unlimited \_\_\_\_\_ Rover \_\_\_\_\_

Are you planning to operate the entire contest time? YES \_\_\_\_\_ NO \_\_\_\_\_

If NO, what day(s) and/or times(s) do you think you will be operating?  
\_\_\_\_\_

Would you prefer to operate from your home station or from one of the multi-ops?

HOME \_\_\_\_\_ MULTI-OP \_\_\_\_\_

If from home, please provide the following information:

Bands you plan to operate \_\_\_\_\_

Power on each band \_\_\_\_\_

Antennas for each band \_\_\_\_\_

If from home and you will be operating as a multi-op, do you need operators YES \_\_\_\_\_ NO \_\_\_\_\_

Do you have operators already lined up? If you need operators, please indicate the MINIMUM number you think you will need \_\_\_\_\_. Comments: \_\_\_\_\_  
\_\_\_\_\_

If operating as a Rover, please provide (weather permitting) a "tentative" list (subject to change) of the grids you think you might activate and what bands you plan to operate ?  
\_\_\_\_\_

There are plans for at least a few Multi-Op stations to be on the air. Would you be willing to participate at one of these stations if given the opportunity to do so? YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, what general location (area) would you like to operate if the opportunity arose? \_\_\_\_\_

If you know of a particular Multi-op station that is going to be on the air and you have a preference where you would like to operate, please indicate

CALL OF MULTI-OP \_\_\_\_\_

Do you own a working Laser unit? YES \_\_\_\_\_ NO \_\_\_\_\_

If YES, would you be willing to have one or more of the rovers "STOP BY" your QTH to not only give you a laser contact but also "run the bands"? YES \_\_\_\_\_ NO \_\_\_\_\_

Please list any NEEDS your own station may need – include rigs, transverters, antennas, feedline, help with getting antennas erected, new bands you would like to activate, etc. BE SPECIFIC  
\_\_\_\_\_  
\_\_\_\_\_

What equipment do you have available to LEND (ie, walkies for FM?, 2 meter multimode? Amps? Antennas? Rotors? Feedline? Other rigs?

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Do you know any other operators (doesn't have to be a Packrat) that might be interested in operating at one of the multi-op stations? YES\_\_\_ NO \_\_ If YES, please provide

Name(s) \_\_\_\_\_ Call(s) \_\_\_\_\_ How to contact \_\_\_\_\_

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Are you familiar with the "Activity Hours"? YES\_\_\_ NO\_\_\_\_\_

If YES, Do you plan on using them during the contest? YES\_\_\_ NO\_\_\_\_\_

If NO, would you like to learn how they are used? YES\_\_\_ NO\_\_\_\_\_

Comments on this subject \_\_\_\_\_

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GENERAL QUESTIONS:

To improve the overall club score, do you feel it would be more advantageous to the club to "Split" your time between operating your home station AND one of the Multi-op station? YES\_\_\_\_\_ NO \_\_\_\_\_  
If YES, please indicate approx when you would be available for the multi-op \_\_\_\_\_

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Is there anything (from a Packrat standpoint – not an ARRL standpoint) you would like to see changed, improved, etc. to make the contest more interesting and/or productive for the club? Be SPECIFIC

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Additional Comments:

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Please respond either by E mail or by Regular Mail to:

Steve Kerns, N3FTI - E mail – [n3fti@yahoo.com](mailto:n3fti@yahoo.com)  
1161 Bernard Drive  
Reading, PA 19605

Bill Shaw, K3EGE – E mail – [k3ege@aol.com](mailto:k3ege@aol.com)  
1612 Lynnewood Drive  
Havertown, PA 19083

# K!ZZ and KA1ZD

## Low Power on 10 GHz

The regular meeting of the PACKRATS was held on 20 October 2005 at the South Hampton Public Library.

After the business portion of the meeting we held the monthly Marion raffle and a large assortment of wonder



stuff for those future project and some useful reference materials was swiftly moved to new shacks.

Following the Raffle we were treated to a rare visit by a member of the ARRL. The Chief Operating Officer Dave Sumner K1ZZ.

Dave came in his unofficial capacity of a 10 GHz enthusiast along with his wife Linda KA1ZD. Dave and Linda are active on 10 GHz using just a few watts and a very portable antenna. Their station can work all the entire contest on a single deep cycle battery using a YAESUR 817 for an IF, their "barefoot" DB6NT transverter and a Zack Lau designed offset dish feed. The transverter electronics and switching are packed into a plastic storage container and mounted to the same board that holds the dish. The entire 10GHz portion of the station is then mounted to a tripod using the pan and tilt head for aiming the dish. A cardboard compass rose is incorporated to aid in aiming the dish. "Works great."

Linda told us of their very first trial, their successes and failures over the years since they discovered 10 GHZ. They have had their adventures trying to operate in heavy fog and rain and making contacts despite the



weather. (They learned a lot about how to keep water out of the feed and electronics).

Dave pointed out a few of the finer features of their very compact 10 GHz system,. It is always exciting to learn how others have expanded



their horizons in Amateur Radio. Dave and Linda haave done so is a rather creative way that gets them out in the fresh air and keeps them sharing their love of amateur radio. Thanks again Dave and Linda. de W3GAD

**Joel Knoblock W3RFC**  
www.therfc.com

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# WHAT'S HAPPENING

## A LISTING OF INTERESTING EVENTS

**5 NOVEMBER 2005**—*W3IY MICROWAVE ACTIVITIES DAY* - 0800 to 1200 local time start on 144.200 and move up the bands—test your gear and try some DX

**10 NOVEMBER 2005**—*PACKRATS BOARD of DIRECTORS* Meeting at the home of K1DS

**17 NOVEMBER 2005**—Regular meeting of the Mount Airy VHF Radio Club (PACKRATS) at the Southampton Public Library at 8 PM. Special guest Joel Harrison W5ZN. Joel is Executive Vice-President of the ARRL and an avid VHF/UHF/Microwave operator.

**3 DECEMBER 2005**—*W3IY MICROWAVE ACTIVITIES DAY* - 0800 to 1200 local time start on 144.200 and move up the bands—test your gear and try some DX

**8 DECEMBER 2005**—*PACKRATS BOARD of DIRECTORS* Meeting

**15 DECEMBER 2005**—Regular meeting of the Mount Airy VHF Radio Club This is the meeting for the final push for the January 2006 VHF Contest. Be here to pick up your contest packet and make any last minute plea for assistance. Get the tentative PACKRATS rover schedules and find out who also will be on the air (PACKRATS)

**7 JANUARY 2006**—*W3IY MICROWAVE ACTIVITIES DAY* - 0800 to 1200 local time start on 144.200 and move up the bands—test your gear and try some DX

**12 JANUARY 2006**—*PACKRATS BOARD of DIRECTORS* Meeting

**19 JANUARY 2006**—Regular meeting of the Mount Airy VHF Radio Club. WA3RLT will be giving his analysis of the 2005 logs. This is where you can pick up valuable tips on the MUST BE ON THE AIR Strategies.

**21-23 JANUARY 2006**—*JANUARY VHF SWEEPSTAKES*—Get working now to finish your improvements. Get on the air to test your equipment while there is plenty of time to get the help you need. Take advantage of the MICROWAVE ACTIVITIES DAYS too!!

**9 FEBRUARY 2006**—*PACKRATS BOARD of DIRECTORS* Meeting

**16 FEBRUARY 2006**—Regular meeting of the Mount Airy VHF Radio Club. This is the annual CRYING TOWEL Evening. Come for the laughs, the tears and the hear of the success of the PACKRATS

**1 APRIL 2006**—*Celebration of the PACKRATS 50 Anniversary.*

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All meetings are announced on the regular Monday Evening Nets. (See Page 2)

Board meetings of the Mount Airy VHF Radio Club are open to all members. Teleconferencing is usually available.

Regularly scheduled meetings of the PACKRATS are open, not only to the membership, but to any party interested in contesting and equipment design and construction for use on the VHF/UHF and Microwave Frequencies.

## SBMS Plans EME with BIG DISH

We have received a go to put the 40M dish at OVRO on 1296Mhz for both remaining weekends of the contest in October and November. We plan to be on shortly after local moonrise as long as possible both days of both weekends. We will be on CW and SSB. We will be using the club call of W6IFE from the San Bernardino Microwave Society.

We will issue bulletins on these reflectors as time gets closer and intend to have our own reflector up soon.

Doug K6JEY

## HELP WITH DISH ANTENNAS

Anyone thinking of putting up a good-sized dish would do well to look this over:

Structural Engineering of Microwave Antennas, by R. Levy

<http://trs-new.jpl.nasa.gov/dspace/handle/2014/32359>

73 Paul Wade - W1GHZ



M  
Y  
S  
T  
E  
R  
Y?

Photo is from the shack of a SILENT KEY who always had a "Big" Signal on the air—Who was he??

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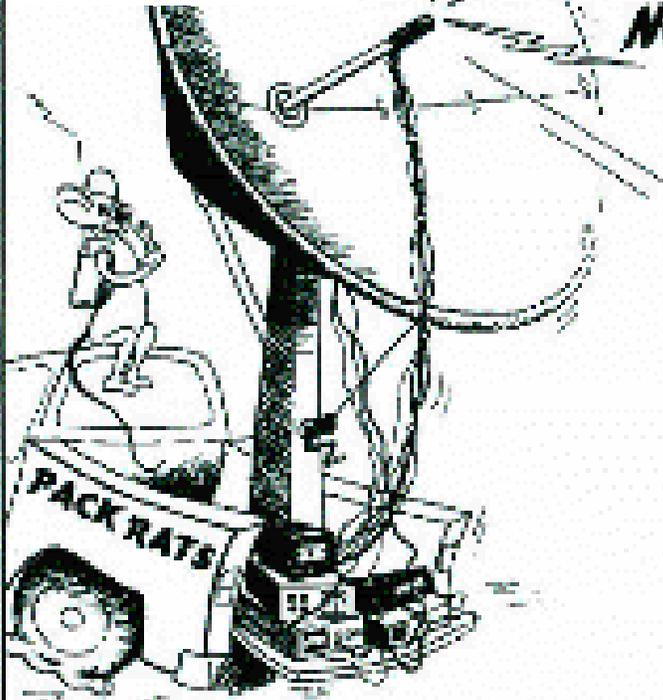
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c/o Doc Whitticar W3GAD  
28 Twining Bridge Rd  
Newtown, PA 18940-9704

# MEETING NOTICE

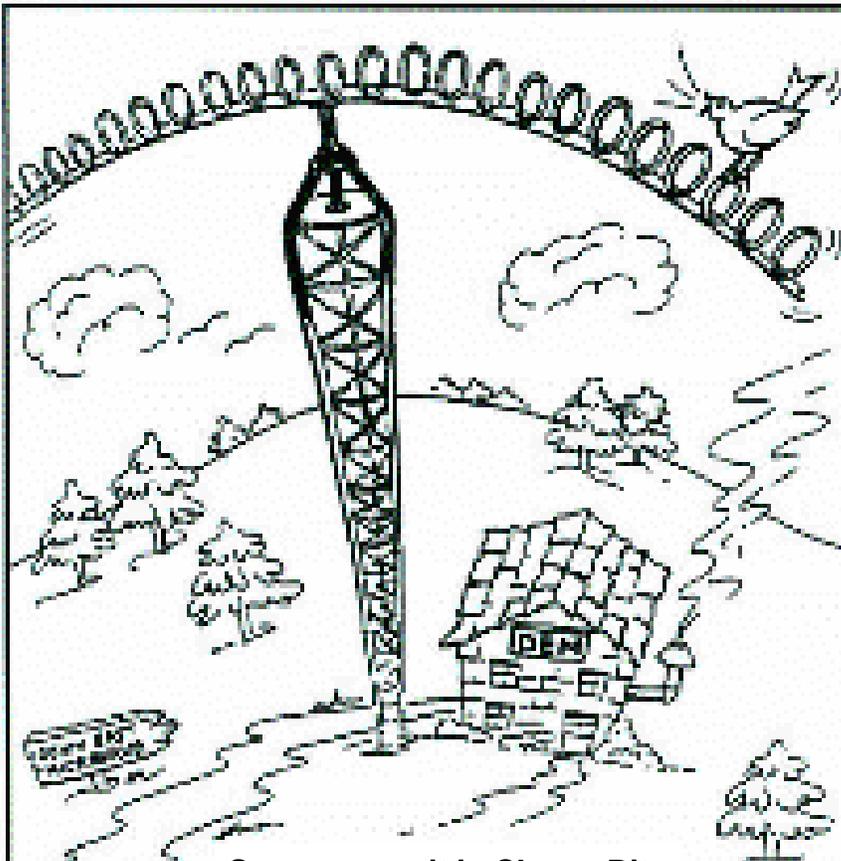


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