



CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume XLVIII

JULY 2005

Number 07

PREZ SEZ

Leon and I did the June contest rove more-or-less as planned, and we are grateful that everything worked mechanically and electronically speaking. We were even able to get a load of 24GHz QSOs in the log, thanks to the rover spots that seemed to be line-of-site

with the mountains, and to some route duplication with WA3GFZ/R. Conditions on Saturday were thick and foggy, so signals strength was down significantly on 24GHz, but never-the-less, we were able to find each other on the band within about 20 KHz of tuning. 10GHz sigs were as loud as ever from almost every stop, except for FM18 where we encountered some new QRM that seemed to almost wipe out the IF. If there was anything new and different to report, it was that the guy that owns the home where we make our FM30 stop in Sea Bright, NJ, came out to see us again, and he's apparently traded his Lexus 2-seater for a new Chrysler Pacifica. He agreed that we were far better off coming there in the daylight Sunday, rather than attempting to stretch our Sat. eve operating 'til 1AM from that spot. Officer Friendly of the Sea Bright Police also showed up just then, reinforcing to us that the world has a million eyes with cell phones, and anything strange appearing is sure to provoke a call to the local force to make sure that nothing illegal is happening!!

So we covered 9 grids, FN10-11-21-20-30 and FM 29-28-18-19 and we were able to quickly orient the vehicle, deploy the dishes, and get on the air and try to work as many stations as we could and then stay relatively "on schedule." Taking more of our own prepared foods would have saved almost an hour that we spent waiting on line for lunch on the Garden State Parkway, but that was the only time things slowed down for us. Leon was at the mike for the majority of the time we were on the road, with me behind the wheel. Next year he gets to do more of the driving.

The Mountain Men & Women (aka Packrats who planned, assembled, operated, repaired and then dissembled and

repacked W3CCX) and rovers are to be congratulated for the magnificent job that they did, despite several handicapping events, shortages of time and personnel, a forgotten tower base, and a relay failure that kept the main 2m station off the air for a few hrs. There was clearly better communication between the operating positions, and a giant leap forwarding coordinating rover QSOs, with some resultant shortcomings created in the ability of the 222 station to accumulate grids and QSO's. There was outstanding production of QSOs and grid numbers with the use of WSJT modes, including some revitalization of EME activity. The Aurora buzz on Sunday came just in time to use the last bits of energy of the ops to max out grid counts, and thrill VHF operators across the country. Just this week I got an email from Dan Henderson, N1ND, asking for some penmanship to write up a summary article of the June contest for QST, and I'm starting to collect material already. I immediately remembered a VHF June contest that I ran from Block Island, RI, with the Providence Radio Association about 1990 or so, when things had really quieted down by early Sunday afternoon, and the two of us still at the mikes decided that we needed a break and grabbed our bikes and did a little pedaling around the island, only to return at 4PM and find an Au buzz session in full swing on 6m, and a great coastal tropo duct on 2m! This year's event will be a fun one to summarize.

Thanks to Doc again, for his fine meal prep, and to all those who made donations before and during the weekend to support the costs for the activity. Thanks also to Warren, WB2ONA for the trailer loan, that reduced our weekend rental costs. There is no question that everyone who helped and participated derived great satisfaction of a job well done, and an exciting weekend, radio-wise!

Thanks to our officers who have completed their service, and welcome to our new officers (VP-K1JT), and board members (K3TUF, N3NGE and N0YMV). Our Otto's outing appeared to be a great success, with plenty of brats and beer for all. We have a paced agenda and hope that everyone will participate in our upcoming White Elephant Sale, Club Picnic, VHF Conference, HAMARAMA, contests, and of course our 50th Anniversary celebration, on April 1, 2006. 73, Rick, K1DS

Pack Rats **CHEESE BITS** is a monthly publication of the
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PACKRAT 222 MHz REPEATER - W3CCX/R

222.98/224.58 MHz, Churchville, PA

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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	50.150 MHz	K3EOD FM29II
8:00 PM	144.150 MHz	N3ITT FN20kl
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

UhOH!!! July 16th and I don't have this issue released yet. Well, here it finally is and I am happy to report that we also have a few fine pieces and some food for thought for the August issue too.

Sometime we are starving for material and all of a sudden we get more than enough. The trick is to try to get the time sensitive information into your hands so you can act on it.

We have been traveling more. That travel found me in California just after the earth quakes. It also found me there over Field Day weekend so I hunted down the Santa Barbara ARC and guest op'ed for a while, then help close the station. They use two mobile units with self contained generators and a tower trailer. I took a lot of photos of the trailer for KF6AJ as he is thinking this may ease the stain on the more senior members of the Camelback team in years to come—Here! Here! now - I resemble that remarks. *I was told this morning I should not complain about the silver in my hair—at least I have hair.*

I have been slowly messing with a replacement 1296 transverter and rack tray interface to get all the blinking lights, amp and controls into one tiny space in my racks—making more room for bigger amps on the lower bands and more transverts for higher bands. I guess 10 GHz should be next.

This weekend is the CQ VHF Contest—50 and 144 MHz only and with the crazy weather just about anything can happen for openings. Next on the operating agenda are the August UFH and UP contest and the September Sweepstakes—all good chances to check your station improvements before the big freeze and the January contest.

Don't forget about the Family picnic at N3ITT's home the last weekend of the month with LIVE?? Entertainment and this coming week is the White Elephant Auction where you can change the content in you own stash of radio goodies, moving out the unused and hopefully replacing it with something useful. I unfortunately, will be away with my wife on a much needed vacation and will be missing the action at the Auction. Hopefully someone will get photos and a story to me soon afterwards as I hope to get the August issue out much earlier than mid-month.

The lineup for the MID ATALNTIC VHF CONFERENCE and HAMFEST is looking terrific and out leadership team is to be congratulated on their effort in putting together what promises to be a very informative and fun Conference.

There are a variety of legislative issues in Congress including spectrum protection billes in both the Senate and the House. It would be a good idea for each to contact their Senators and Congress men and have them get behind the legislation. More specific information can be had from the ARRL NEWS LETTER or e-mail me and I will forward the information.

I had better get packing for next weeks trip. No tools, no cell phone and unfortunately no radio either but I am sure the week will fly by and I can then face the second half of 2005 with renewed energy.

Listen for the WEAK
ONES

73 W3GAD Doc



VHF Contesting, Condo-style

Hello, my name is Mike and I'm antenna restricted. *Hi, Mike.*

Okay, maybe it's not that bad; but in a hobby where antenna farms, towers, and big power tend to dominate the headlines, small stations can start to feel, well, puny. I'm sure you've heard the saying that big things come in small packages. That may be a given with the XYL's anniversary gift, but I believe the same can be true about small ham stations as well.

Many antenna restricted hams live in single family homes governed by a homeowner's association. This situation is the focus of many legal battles attempting to enact PRB-1 type legislation. While this is a positive and necessary effort, not all restricted hams fall into this category. The second group of restricted hams are those who own their home, but not the land on which it sits. This is my situation, and I'll be sharing how I've handled it in just a moment. Since the homeowner does not own the land, he or she has no legal right to place a radio tower on that property. PRB-1 laws have no direct impact on this group. The third group of restricted hams are those who rent or own only one floor of a unit and must perform all their activities from within their living space. I'll have a few words to say about this a little later on.

Let me describe my home for a moment. I live in Bensalem, PA, a not-so-small town in the southern corner of Bucks County between Philadelphia and the Delaware River. It's not very high above sea level, and I have a hill that rises about 30 ft. less than a quarter mile to the west. I live in the center unit of an 8-unit townhouse building. I have two floors plus an attic, but no basement and no access to the roof. The building runs pretty close to north-south, with several more buildings in line on the south side. My attic isn't your typical A-shape, but slants the same direction for nearly the whole length. This leaves a nice 8-foot apex on the west side.

With this arrangement, I've had more than one person tell me I shouldn't even bother with VHF contesting. Fortunately, I've never been one to listen to naysayers. My first radio was a Yaesu VX-5R HT that I purchased shortly after I got my Technician's license in 2001. At the time, I was living in an apartment, and my only antennas were a couple of homebrewed twin-lead J-poles and a couple of short beams that I borrowed from a fellow club member. During the January 2002 VHF contest, I worked three bands FM only, 5W on each band, and ended up with 5 multipliers and 20 or so QSOs. I enjoyed myself, and this experience gave me a point of reference that I could build on for future endeavors.

In April 2002, I upgraded to General class, and started saving for an all-mode multiband radio. Shortly thereafter, I purchased the home just described. Two factors influenced my choice of radio: it had to be relatively portable since I wanted to take it with me when travelling, and it had to be capable of 5W or less since I intended to use it as an IF for a transverter at some point. The second factor wouldn't have been too difficult, except for the radiation protections required by ham radio stations. VHF and UHF have much stricter radiation requirements than HF and running 100W on 2m into a dipole just above your head on a regular basis is not considered a good idea. At the time, the Yaesu FT-817 fit my requirements for portability and low power, and it was at a price I couldn't resist.

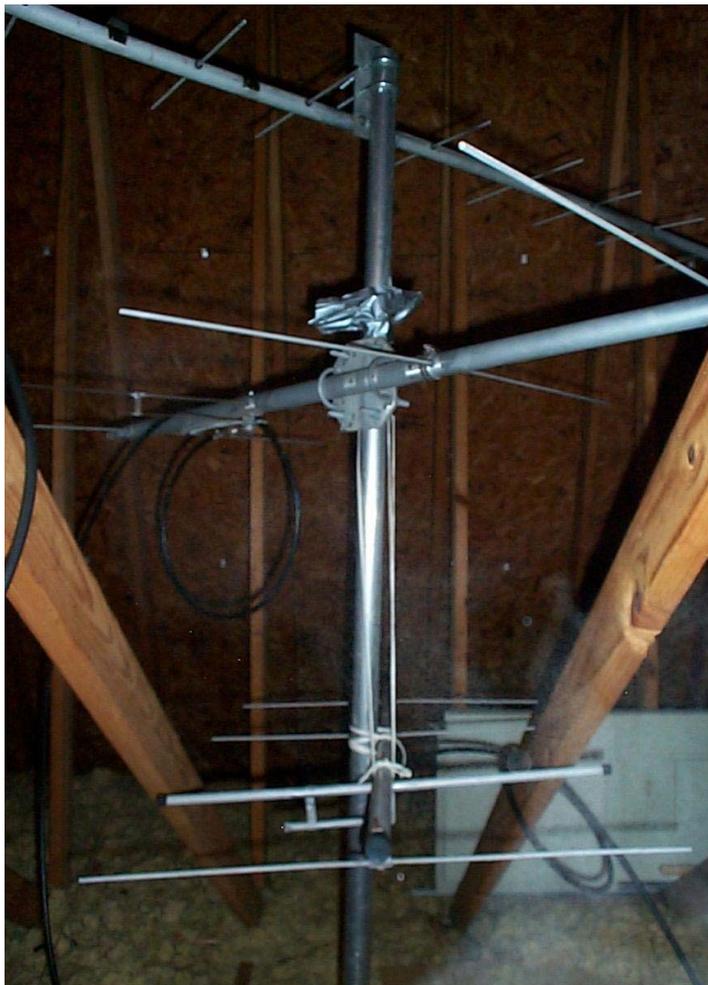


I figured I could add temporary low-power amplifiers for the contests, and keep them in storage during the rest of the year to limit radiation exposure. As it stands, I have not yet purchased any amplifiers for my station, but have been grateful to borrow a single 2m amp each January from a fellow Packrat. I have been slowly adding components to my station, but much of my January effort is borrowed. This includes a 222 transverter and 2m and 125cm short beams, in addition to the 2m amp. The beams are placed on a short mast in the attic along with a longer beam for 432 and a dipole for 6m. Because of the cross-beams in the attic, there is no way to rotate the beams once they are placed. For this reason, the short beams (with a 4' or 6' boom) are more effective than a longer beam. If you don't have an attic, mounting a couple short beams on a short mast in your living space pointing out the window will also work. I did this in 2003 before I moved everything to the attic and scored fairly well by my standards.

The short mast I use was made for me by a fellow Packrat using a 6ft. length of aluminum pipe, threaded into a base mounted on a wooden X-frame. If your beams are extremely lightweight, and your mast isn't much longer than 6ft., you may be able to get away with a completely PVC arrangement for indoor use. It is important to be careful of beam interaction when placing multiple beams on the same mast. A number of good articles have been written on this subject, and it would be valuable to the restricted amateur to take advantage of every efficiency he or she can find.

My station consists of 5W on 6m, 90W on 2m (with the borrowed amp), 5W on 222MHz (with the borrowed transverter), and 5W on 70cm. How much contribution can I make with this setup to the club score? Much more than one might think, to be honest. Let's say I score 10 multipliers in an average contest, and make 100 QSOs. Let's also say that 50 of those QSOs are with fellow Packrats. For simplicity's sake, let's say the average multiplier for the Packrat I exchange with is 75. If I work 10 Packrats on all 4 bands (40 QSOs, 8 points raw score per ham) and another 5 Packrats on 2 bands (10 QSOs, let's say 3 points raw score per ham). My log would show 1100 points ((8pts X 10hams X 10mults) + (3pts X 10hams X 10mults)). This may not seem like much, but when I consider

Continued on PAGE 4



NEW 1296 N3FTI BEACON ON THE AIR

A new 1296 beacon has been put on the air from my home in FN20aj just north of Reading, PA. The beacon operates continuously on a frequency of 1296.262 MHz and carries the call N3FTI/B. Its intent is to provide a high ERP propagation indicator for stations to the south and west of FN20

The beacon consists of a 1296 MHz brick oscillator that is referenced to an external 99.71246MHz ovenized reference oscillator. The output of the brick enters an isolator before being keyed by a commercial PIN diode switch controlled by a single chip K10 beacon keyer IC. The output of the switch is amplified by a Down East Microwave 2318PA amplifier and a five-pole cavity filter filters the resultant output. The final output power from the filter is 10watts.

After leaving the filter the signal travels through 65' of Andrew 1/2" Superflex before being radiated by a WA5VJB LPDA antenna at 30' (above average terrain) with a beam pattern to the southwest.

Plans are to install additional beacons for 10Ghz, 2304, 903, and 3456MHz in that order.

Because this beacon is new and still in the burn in stage please send any and all signal reports to me at my email address - n3fti@yahoo.com

Steven Kerns, N3FTI

that for all the other logs submitted, these same 50 QSOs have added 8250 points to the club score in addition to my own, the effort begins to add up.

What's more important than the score submitted are all the other aspects of ham radio that make it such a great hobby. During the contest, I get to talk to folks I don't normally get to contact, even if only for a few seconds. The bands turn into magic when you least expect it.

What are some strategies that have helped me get the most out of my station?

1. Call CQ. It seems a majority of hams spend a majority of their contest time scanning for other stations calling CQ. While this is good to do occasionally, especially to contact the high-power stations, you'll build up your QSO rate more by wearing out your voice keyer and TR switch than by scanning around. You'll also have a better chance of grabbing that 2 minute band opening to a new grid if you're calling CQ than if you're listening for someone else to call CQ.

2. Know your limitations. Low power stations need to find the balance between chasing a new grid on a band and making as many QSOs as possible. When a station wants to run bands, you need to make a choice: does either station have enough strength in the antennas to complete the contact on a weaker band? Unfortunately, this is a question that can only be answered by experience. It may take a few contests to get familiar with which stations can be reached and heard on which bands successfully.

3. Enjoy yourself. A low power, antenna restricted stations is not going to be bringing home any first place awards. But as you improve your own station and your own score from year to year, you can take pride in your accomplishments.

73 de KB3GJT
Michael J. Sabal

Looking for older HP Manuals?

Many manuals for older discontinued HP and Agilent test equipment are available for download at: http://www.home.agilent.com/cgi-bin/pub/agilent/library/cp_Library.jsp?

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NOTE: From the WA1MBA—MW Reflector

JUNE CONTEST AN ESSAY OF FEW WORDS

PHOTO CREDITS

W3IIT, W2PED K3IUV, K3JJZ, K1DS MAYBE OTHERS TOO

10 June—Loading all the gear at Bob's W3GXB



KB3XG Brought his electric sledge—what a back saver!

K3EGE 7 W3IIT selecting towers and masts



Getting organized on the mountain or where is that tower base?



All together now - keep moving the dishes upward



CheeseBits



Just a little more to the left—watch your fingers there Bruce.

JANUARY in JULY

Allright, I know it is in the 90s and humidity is at 100% but lets think back to January when loopers were iced up and relays refused to switch because of the cold!

This is your July 1st wake up call! Now is the time to think about adding the next band or improving that old array that has been on the tower for 20 years. Start making plans NOW for the ARRL January VHF Sweepstakes.

The contest is the weekend of January 28-30, 2006 so mark you calander NOW before your YL or XLY schedules something on that date!

Multi Op stations should be planning your rosters! Everyone should be thinking about what did and did not work last year. Get it fixed NOW!

Maybe it is time to add some digital modes for meteor scatter or EME to get the grid count higher, NOW is the time to

play with these, not hours before the contest!

Rovers should be planning their routes and scouting out new sites, or at least verifying that their old sites are still accessible.

It is hot outside now, no better time to be in the basement or air conditioned shack working on that project that will increase your score! Need help with getting a project done, NOW is the time to ask for help from your fellow club members, don't wait until a week before the contest!

Our goal should be 3 Million points. With planning this is a very reachable goal!

This is your "July 1st Wake Up Call", lets get started working toward this goal NOW!

73 de Your January Contest Chairman, Steve Kerns,
N3FTI

n3fti@yahoo.com



THE JUNE CONTEST SURVIVORS

The Grand Finale of any contest is the sense of accomplishment when the equipment is finally stowed away for another year and we get to review what we have accomplished on the mountain; as can be seen by the smiling faces of the sweaty dozen who saw to the closing of the W3CCX June contest station. Back row: KF6AJ, K1JT, N3NGE, KB3XG, WA3RLT, N3ITT, K3EGE, K3JJZ, Front row: W3GAD, WA3NUF,

JUNE CONTEST NOTES: There are many more photos from the three days on Camelback Mountain and I hope show more next month. Overall we put together a tremendous station and produced over 1 million points for the multi-op effort. Many thanks to our rovers too for their efforts truly helped our total score—73 W3GAD

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WHATS HAPPENING

A LISTING OF INTERESTING EVENTS

16 TO 17 JULY 2005—CQ VHF CONTEST 50 and 244 MHz only—*Rules next month*

21 JULY 2005—Annual PACKRATS WHITE ELEPHANT AUCTION at the Home of Gary Hitchner WA2OMY, 39 West Mount Kirk Avenue, Norristown, PA bring you un-used stuff so you can make room for all the fine treasures you will acquire at the auction.

30 JULY 2005—*RAIN DATE 31 JULY*—ANNUAL PACKRATS FAMILY PICNIC at the QTH of Al and Carol Shepard N3IIT, 77 Foellner Lane, Ottsville, PA Lots of good food. Bring your swimming suit. Live entertainment by “NEWSIES” With WA3GFZ and friends. *This will be the August meeting.*

11 AUGUST 2005—PACKRATS BOARD of DIRECTORS Meeting

5 SEPTEMBER 2005—Final call for papers for 2005 MID-ATLANTIC MICROWAVE UPDATE PROCEEDINGS.

15 SEPTEMBER 2005—PACKRATS BOARD of DIRECTORS Meeting

22 SEPTEMBER 2005—Regular meeting of the Mount Airy VHF Radio Club (PACKRATS) at the Southampton Public Library at 8 PM. Final preparations for the Conference and Hamfest

24 SEPTEMBER 2005—MID ATLANTIC VHF/UHF/MICROWAVE CONFERENCE Sponsored by the Mount Airy VHF Radio Club (The PACKRATS) at the COURTYARD by Marriott. See page 8 for more information and page 9 for registration form

25 SEPTEMBER 2005—PACKRATS HAMFEST—Middletown Grange Fair Grounds, Wrightstown, PA

13 OCTOBER 2005—PACKRATS BOARD of DIRECTORS Meeting

20 OCTOBER 2005—Regular meeting of the Mount Airy VHF Radio Club (PACKRATS) at the Southampton Public Library at 8 PM. Special guests Dave and Linda Sumner K1ZZ and Lind KA1ZD will their experiences on 10 GHz. Dave is Chief Executive Officer of the ARRL.

27 TO 30 OCTOBER 2005—MICROWAVE UP DATE 2005 sponsored by San Bernardino Microwave Society and Western States Weak Signal Society—Cerritos California (Near Los Angeles)

10 NOVEMBER 2005—PACKRATS BOARD of DIRECTORS Meeting

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.

8 DECEMBER 2005—PACKRATS BOARD of DIRECTORS Meeting

15 DECEMBER 2005—Regular meeting of the Mount Airy VHF Radio Club (PACKRATS)

Joel Knoblock W3RFC

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MID-ATLANTIC STATES VHF CONFERENCE



Sponsored by:

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THE PACKRATS

SAT SEPT 24, 2005

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Your advance registration of \$69 includes:

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Sat lunch

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Auctions

Sat eve Banquet

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Preliminary Conference Speakers list includes:

N1JEZ, W1FKF, W2PED, K1JT, K1WHS, KA1ZE, N2UO, ND2X/5, N4FLM, N1MRC

Call for papers: Please submit ASAP to: Paul Drexler, W2PED
28 West Squan Rd, Clarksburg, NJ 08510 pdrexler@hotmail.com

Copies for proceedings *deadline July 31*

For further information please contact conference chairpersons:

Jim Antonacci, WA3EHD 215-659-4359 jantonacci@worldnet.att.net

antonacci@worldnet.att.net or

Rick Rosen, K1DS 610-270-8884

rick1ds@hotmail.com

Web site for further info and maps:

<http://members.ij.net/packrats/latest.htm>

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MID-ATLANTIC STATES VHF CONFERENCE

Advanced Registration Form

Name _____ Call _____

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Additional attendee(s) name/call _____

Conference package @\$69 per person: number: _____ total: _____

Additional Proceedings @\$20 each: number: _____ total: _____

Additional Lunches @\$16 each: number: _____ total: _____

Additional Banquet Dinner @\$29 each number: _____ total: _____

Grand Total payment enclosed: _____

Please make checks payable to: **Mt Airy VHF Radio Club, Inc.**

Advanced Registration deadline must be received by Aug 31

Registration package after Aug 31st is \$79 per person

Space is limited, please register early!

Send completed registration form and check to:

DAVID J MASCARO, SR W3KM

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Contact the hotel directly for reservations

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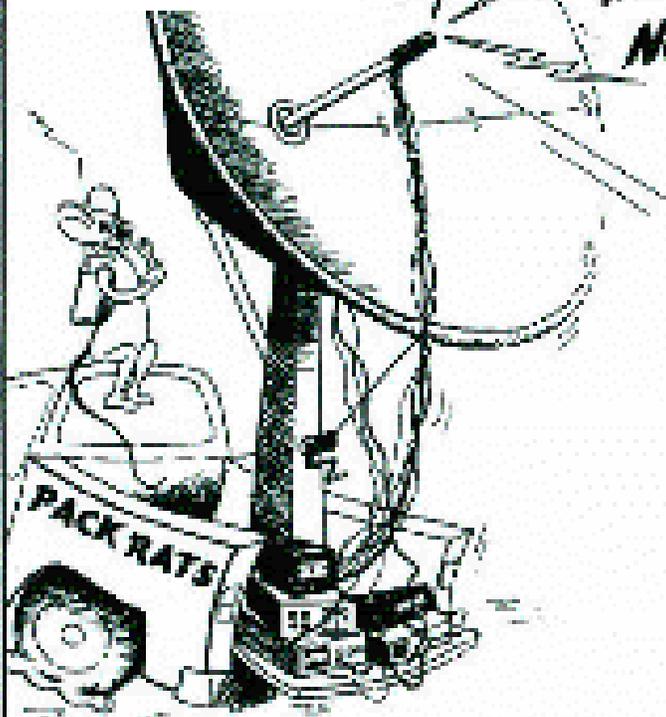
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<http://members.ij.net/packrats/latest.htm>

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c/o Doc Whitticar W3GAD
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MEETING NOTICE



LOOKING AHEAD:

WHITE ELEPHANT AUCTION
21 July at WA2OMY's QTH

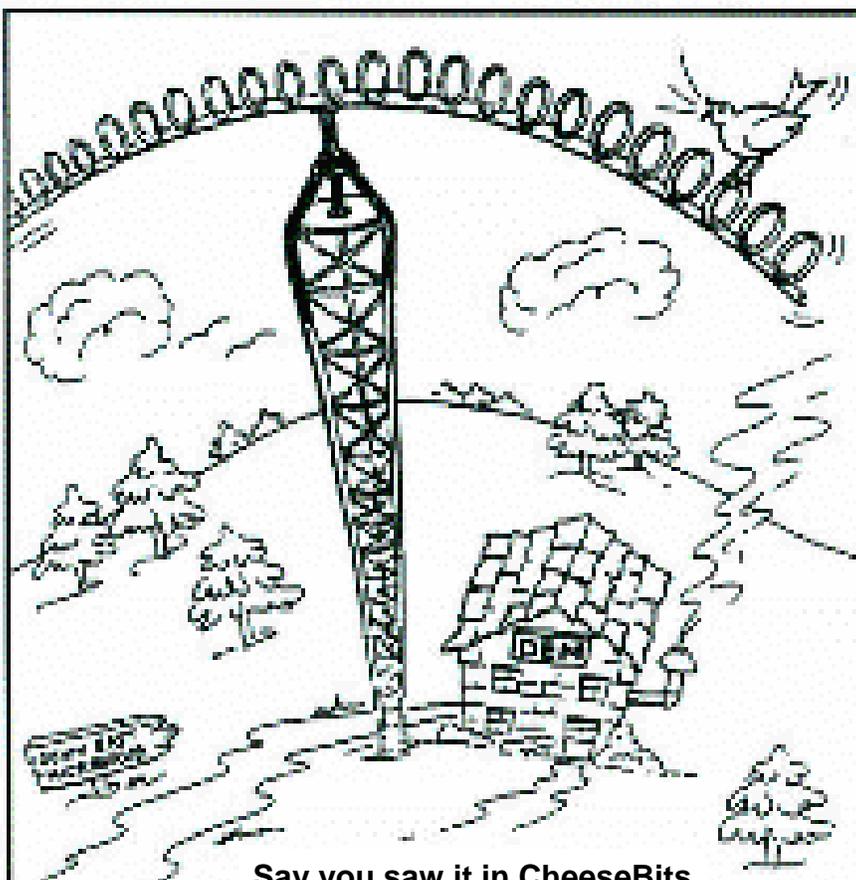
PACKRATS FAMILY PICNIC
30 July at the QTH of N3ITT

INSIDE:

CONDO CONTESTING by KB3GJT
June Contest Photos Part I
VHF CONFERENCE
Flyer and Registration Forms

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