

# PACK RATS'



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# CHEESE BITS



MT. AIRY VHF RADIO CLUB, "THE PACK RATS", PHILADELPHIA, PA. W3CCX  
NET FREQUENCIES: 50.150, 144.150, 222.125, 224.58/222.98, 432.110, 903.100, 1296.100 MHz  
AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE ARNS

Meetings: Third Thursday of each month at 8:00 PM  
Southampton Free Library, 947 E. Street Road  
Southampton, Pennsylvania 18966

SCANNED TO PDF BY BERT, K3IUV, 2013

VOLUME XXXVII

March 1995

Number 3

## THE PREZ SEZ

Our February Crying Towel meeting was well attended - there never seems to be a shortage of Crying Towel stories when it comes to the January Contest. Thanks to Al, N3ITT for this year's award. The moral to the story is that Murphy is alive and well!

Now that the contest is over though, it's time to wage a concerted battle plan against Murphy. Talk to any Rat that has a Crying Towel proudly (?) displayed in his shack and you'll learn that a well-planned, maintained station is the best insurance against catastrophe. It's no fun to have equipment break down on you during a contest. Most of us have learned that the time we spend improving our equipment and antenna systems not only helps performance, but also reliability. And of course, the time we spend on the air helps us identify any problems we may have lurking. Take a look at your equipment now and make a shopping list for the upcoming Spring hamfest season. Anybody know a good source for high power TR relays suitable for 432?

Our March program will be Homebrew Night. Last year we had to set up additional tables to accommodate all the great projects on display. There's been a lot of equipment built over the past 12 months so I'm sure we'll be seeing some interesting projects at our next meeting. There's often much to be learned by seeing how the various projects are designed and constructed. Visitor's are always invited and this is a great meeting to bring a friend that shares an interest in weak signal VHF. CU there!

73, Paul Drexler, WB3JYO

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

SUBSCRIPTION RATE: \$10.00 PER YEAR (USA)  
\$12.00 PER YEAR (CANADA)  
\$15.00 PER YEAR (ELSEWHERE)

We operate on an exchange basis with other publications. Anything that is printed in **CHEESE BITS** may be reprinted, unless otherwise stated, provided proper credit is given.

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WA3NUF, Phil Migulez (2 YRS)

**MONDAY NIGHT NETS**

<u>TIME</u>	<u>FREQ.</u>	<u>NET CONTROL</u>
7:30 PM	50.150 MHz	K3EOD
8:00 PM	144.150 MHz	W2EIF
8:30 PM	222.125 MHz	WB2YEH
8:30 PM	224.58R MHz	K3ACR
9:00 PM	432.110 MHz	WA3AXV
9:30 PM	1296.100 MHz	WA3NUF
10:00 PM	903.100 MHz	N3AOG

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LADIES' NIGHT: WA3YUE 610-630-1875  
JUNE CONTEST: WB3DNI 215-672-5289  
HAMARAMA: WB3JYO 609-538-1687  
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March 1995

- 1 Ash Wednesday
- 4 Shore Points ARC Springfest 95 at Holy Spirit High School, Rte 9, 1/2 mile S. of Rte 30 in Absecon, NJ. TI on 146.385/.985.
- 4-5 ARRL International DX Contest (phone). See page 122 of the Dec. Issue of QST for rules.
- x5 Annual North Jersey Hamfest on Morris Ave. in Denville, NJ. Talk-in on 146.385/.985 .52S and 223.86/.26. VE exams will be given.
- 9x Packrat Board of Directors Meeting at the QTH of Dave, WA3JUF. All interested parties welcome. Starts at 8:00 P.M. Call 215-795-2648 for directions.
- 12 8th Annual York Springfest at the York Fairgrounds, York, Pa. VE exams will be given. Talk-in on 146.37/.97. VE exams will be given.
- 17 St. Patrick's Day.
- 16 March meeting of the Mt. Airy VHF Radio Club at 8:00 P.M. at the Southampton Free Library on Street Rd. The program will be the annual HOME BREW Night. Bring your successes, failures and works in process to share with all. You do not have to be a member to enter. All interested VHFers and microwave enthusiasts are welcome. Prizes will be awarded in several categories.
- 20 Death of Brendan, Dublin 1964.
- 25-26 Timonium Md. ARRL Maryland State Convention and Greater Baltimore Hamboree and Computerfest at the Maryland State Fairgrounds. VE exams given.

**JANUARY CONTEST - WRAP UP!**

By: Al, N3ITT

Well the smoke has cleared and the Big Guns have fallen silent, another January contest has come and gone! Thanks to all those who participated in the club's effort this year. As of the wrapup at Ron's the club score is 1,414,680, with 43 logs submitted.

Now, while the contest is still fresh in our minds, this may be the best moment to take some time and think about what we each need to do to improve our efforts next year. What went wrong? What went right? Think about planning some antenna work now, so you can be ready for the good weather. Don't just examine equipment, think about what operator skills you need to improve on. Review your logs. I'm sure many of us can see things we missed in the contest. Better planning next time means a better score!

OK. - Well now that the contest is over, one thing is obvious to me. If the Pack Rats are to get back to being unlimited club champions the first thing we need are more logs. This means getting new members and getting inactive members going again if possible! Everyone of us should make a sincere effort to recruit members. Invite non-members to meetings, the hamfest, the conference, and maybe have them visit our June site at Camelback.

Perhaps you can invite a ham who has never experienced weaksignal modes to come up to your shack, possibly during the September contest and let them operate with you. I truly believe that many hams, new or old, that have never operated CW or SSB on the VHF/UHF bands, will "catch the Bug"! I know, I've seen it happen!

More importantly, new members just don't contribute January contest logs, they bring with them fresh ideas and enthusiasm, something there can never be too much of! Saying "If you build it, they will come" works fine in the movies, but this real life. Mohammed can wait for the mountain to come, till the cows come home, and it just ain't gonna happen! So let's try to take any opportunity we have to talk up the club and build our members. At this time it appears that I will again be the January Contest Chairman next year. One thing I will be doing is getting the questionnaires out earlier. Get them back to me ASAP. I will be taking the info on what help people can give, and what they need and creating a complete directory of this data which I will send out in an additional mailing! Well that's about it for now. Look for this column to resume in the fall. Till then we'll leave this space to the June Contest Chairman, Pat WB3DNI.

73es CU on the bands - Al, N3ITT

February 7, 1995

To all radio amateurs SB QST ARL ARLB012ARLB012

The FCC has reallocated 50 MHz of spectrum, including 2390 to 2400 and 2402 to 2417 MHz, from government use. The Commission made these segments available for unlicensed, low-power devices including wireless LANs. At the same time, the FCC elevated Amateur Radio's status in those segments from secondary to primary. This means that amateurs will not have to protect any other user of those bands, and amateur stations are entitled to protection against interference. The Commission made available 2390 to 2400 MHz for use by unlicensed Personal Communications Services (PCS), and provided for continued use of 2402 to 2417 MHz by traditional unlicensed "Part 15" electronic devices. The unlicensed PCS devices, which include wireless networking and data transfer devices, will be governed by the same rules that apply to PCS devices operating in the 1910 to 1920 MHz band. The FCC said it believes these allocations will provide for the continued development and implementation of a new generation of advanced communication devices and services, including a new "on ramp" to the information superhighway. The remainder of the 50 MHz of allocated spectrum is at 4660 to 4685 MHz, to fixed and mobile services, an allocation not directly affecting amateurs. (Action in ET Docket 94-32.) NNNN/EX

### Health and Welfare

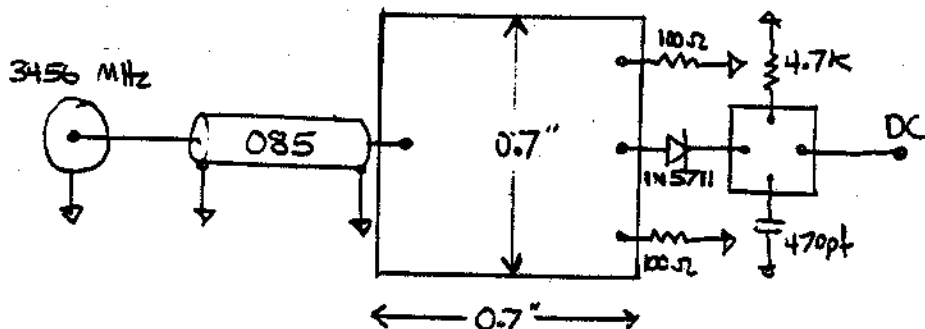
Dave, N3CX, is home and receiving therapy. Give him a call.

### CHEAP MICROWAVE DETECTOR

By: John, KB3XG

I recently added a VSWR circuit to my 3456 rig. I needed 2 detectors but didn't want to buy those expensive HP diodes. I had some cheap Schottky diodes (1N5711) in my junk box. These diodes have about 2 pF shunt capacitance to ground. At this frequency, the 2 pF looks like a pure capacitance located on the outside ring of the Smith Chart. (0.2 - j20 Ohms) It is very difficult to match to this impedance.

Shunting the pure capacitance with a lossy element (resistor) will make impedance matching possible. I used 2, 100 Ohm chip resistors in parallel as a termination for the detector diode. The network analyzer told me that the impedance of my circuit was now 6 - j16 Ohms. This is a much easier impedance to work with. I calculated that a 0.43 wave, 10 Ohm transmission line would get me back to 50 Ohms. 0.43 wave and 10 Ohms at 3456 MHz works out to be 0.7 by 0.7 inches on 0.032" teflon board. The detector has better than a -20 dB return loss and I am able to detect signals down to -10 dBm without biasing the diode.



3456 MHz Detector

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March 1995

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Mt. Airy VHF Radio Club Inc.

'The Packrats'

January 1995 VHF Sweepstakes Contest

Total Logs 46

Total Club Score 1,481,643

Call	Contacts and Grids per band									Totals	
	50MHz	144MHz	222MHz	432MHz	903MHz	1.2GHz	2.3GHz	3.4GHz+up	Contacts	Grids	Score
WA3AXV	91 12	237 23	117 18	144 20	35 9	58 11	17 4	20 6	719	103	156,354
WA3NUF	127 23	269 26	90 16	99 20	31 6	46 11	16 3	12 3	690	108	141,048
WB3JYO	115 16	232 26	86 17	97 16	33 8	48 8	14 3	10 2	635	96	117,984
N2SB	77 14	222 30	84 17	65 16	26 5	40 6	15 3	12 3	541	94	101,238
WB2YEH	77 9	181 17	87 12	96 15	35 7	47 7	16 3	11 2	550	72	84,096
WB3DNI	49 8	191 22	52 6	82 15	28 4	36 5	11 2	13 4	462	66	63,096
N3DQZ	144 18	216 21	90 12	89 15	31 6				570	72	60,624
WA3JUF	52 6	175 18	87 15	63 11	28 5	37 6	9 2	1 1	452	64	55,488
N3EXA	88 14	227 22	91 14	112 16					518	66	47,586
KB3IB	65 12	137 20	69 12	62 12	20 4	34 5			387	65	44,200
WA2OMY	48 8	116 17	62 9	59 13	20 3	15 3	6 2	8 4	334	59	38,822
AK3O	64 9	116 15	69 8	70 11	24 2	25 3	11 2		379	50	37,100
N3NGE	24 5	99 20	62 13	63 16	17 5	18 4			283	63	32,319
W3KKN	111 13	181 13	54 6	53 7	23 2	25 3	2 1		449	45	32,130
K3IUV	68 10	140 17	66 7	75 13		18 2			367	49	27,538
W2EIF	40 7	128 14	64 12	51 10	13 2	23 2	2 2		321	49	27,342
W3IIT	75 13	180 24	52 11	49 8		3 1			359	57	26,733
WB8ZAR	71 11	148 20	48 12	46 10	10 3	1 1			324	57	25,707
N3GSA	56 7	169 16	51 8	58 9	21 3				355	43	22,661
WA3AQA	78 8	148 15	70 7	54 6		14 2			364	38	20,140
W3GXB	43 6	114 14	42 9	46 6	17 2	13 2			275	39	17,667
W3GAD	94 14	193 21	55 3	1 1					343	39	15,561
KB3XG		36 6	29 4	26 5	20 3	21 3	11 2	13 5	156	28	14,056
K3DMA	67 7	116 7	61 6	46 4		10 2			300	26	11,362
WA3YUE	33 5	73 11	35 4	34 5	13 3	13 2			201	30	10,440
WB3VLA	38 7	66 11	28 2	42 5	10 2				184	27	7,668
KB3QM	33 15	76 25	15 11						124	51	7,089
WA3EHD	67 10	148 10	46 3						261	23	7,061
KU3A	51 10	80 8	28 7	18 4					177	29	6,467
K3ESJ	54 10	106 18	20 3						180	31	6,200
N3AOG	10 2	22 3	19 2		16 2	19 2	14 2	2 2	102	15	5,070
K3EBZ		105 12	35 2	25 2					165	16	3,600
W3HFY	25 3	24 6	18 2	30 4	4 2	4 2			105	19	3,363
WA3RLT		70 10		22 5					92	15	1,710
K3PHY		113 6	12 2		7 2				132	10	1,650
W3HK	29 3	53 5	9 2	11 2					102	12	1,464
N2DEQ		120 9							120	9	1,080
K3BPP		18 2	21 2	27 3		5 1			71	8	1,072
KA3MGB	21 4	52 6	6 2						79	12	1,020
WA2GFP		53 3	24 2	3 2					80	7	749
W3CXU	48 3		27 2						75	5	510
N3EVV		6 5		2 2		1 1			9	8	112

Multi-Ops Call	Contacts and Grids per band									Totals	
	50MHz	144MHz	222MHz	432MHz	903MHz	1.2GHz	2.3GHz	3.4GHz+up	Contacts	Grids	Score
W0RSJ W/W0RSJ, WB2ONA, W1PV, WA3YUE	145 17	266 24	78 18	86 16	21 4	27 7	3 1	1 1	627	88	84,744
N3IIT W/N3IIT, N3OZO, WQ3X, N3PSJ	114 12	287 26	55 6	126 22	26 4	26 3			634	73	70,883
K3EOD W/KEOD, WA3IAC, WR3P, N3UCS, WF3C, N3DG	99 11	247 15	56 4	33 4	5 2	6 2			446	38	21,584
K3MFI W/K3MFI, N3EMA	91 10	164 13	23 2	60 8		18 2			356	35	17,255

# PACKRAT LADIES NIGHT

## MILLRACE INN

HOLLAND, PA.

May 13, 1995

6:30 PM

### UPCOMING PROGRAMS

By: Gary, WA2OMY

March: Annual Homebrew Night

May: ARRL Night

### TID BITS

Al, N3ITT, and Don, N3OZO, have agreed to take over the Monday Night 222 FM net from Rich, K3ACR. Rich deserves our thanks for a very, very long stint as net control.

The 1995 Mid Atlantic States VHF Conference date has been scheduled for Saturday, 30 September. The following day, Sunday, 1 October is the date for HAMARAMA '95.

Elliott, K3JJZ, dropped a note to the Prez. expressing his wishes to continue being a member of the club although a little inactive due to his busy work schedule in Washington. For those of you with e-mail access, Elliott can be reached at [weismane@usa.red-cross.org](mailto:weismane@usa.red-cross.org). There are quite a few "rats" on the Internet. If you would like to let others know your address, drop a note to the editor at [hbrown@resd.vf.ge.com](mailto:hbrown@resd.vf.ge.com) and a listing will be placed in Cheesebits.

Two projects in process have been announced. Paul, WB3JYO, and wife are expecting and Scott, N3GSA and wife are also expecting.

### SWAP SHOP

(send all ads to the editor)

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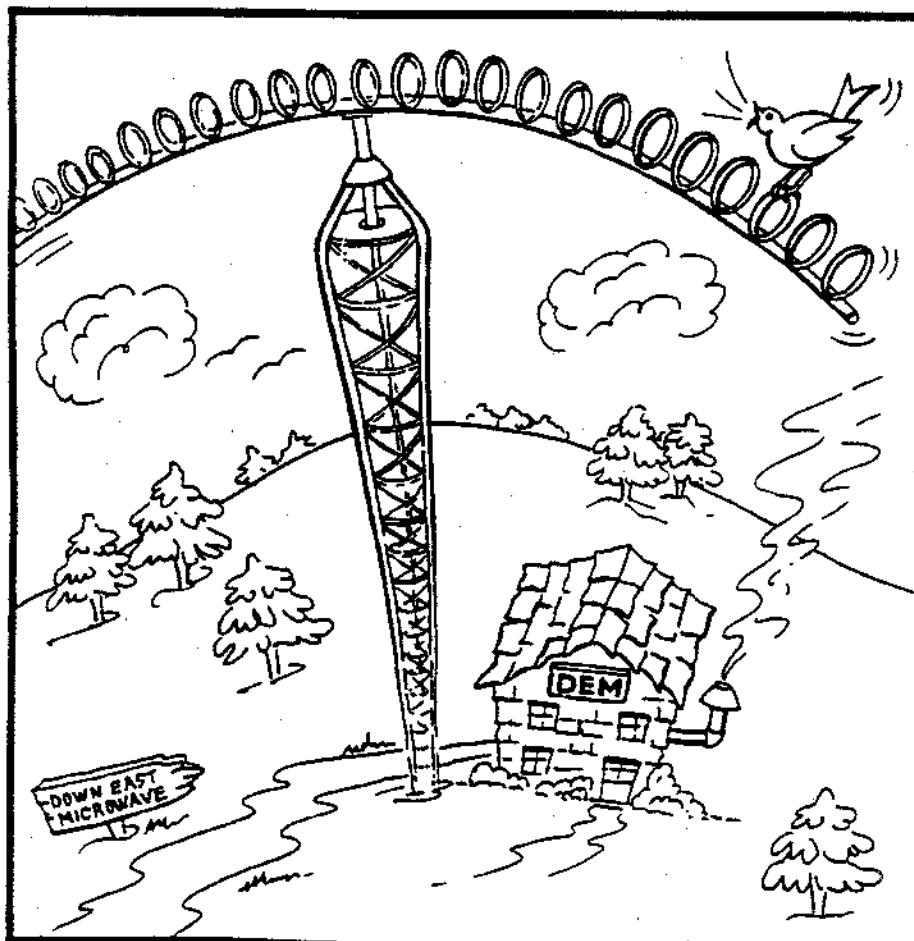


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