

# PACK RATS'



**PACK RATS**

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

# CHEESE BITS



MT. AIRY VHF RADIO CLUB, "THE PACK RATS", PHILADELPHIA, PA.  
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

W3CCX

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, K3JUV, 2013

VOLUME XXXVI

March 1994

NUMBER 3

## THE PREZ SEZ

Our crying towel meeting was well attended as usual! It seems that Murphy (not RSJ - the other Murphy) always has a way of rearing his ugly head during our January contest. It always makes for a few good laughs -after the contest, that is! Perhaps you too were a victim of Murphy - the best defense is to learn by our experiences and continue to make station improvements to improve our operations. take a look at what you'd like to accomplish in the coming year and bring your projects to the next technical session. Remember, there's lots of assistance available within the club.

I urge all Packrats to take a few minutes and call or write to our new CAC representative, Tim Duffy, K3LR, and provide your thoughts or comments regarding the proposed Rover rule change (see last month's Cheesebit's for info). It's absolutely necessary that Tim hears from us if we stand any chance on changing the scoring inequality created by the present rover rules. The club's letter suggested either 1) prohibiting rovers from working other rovers, or 2) changing the rover scoring so that grids can only be counted once per band regardless of location, more like a home station. Whatever your response is, let's all get in touch with K3LR.

Our next meeting will showcase our memberships homebrew projects from the past year. Whether you've built something big or small, sophisticated, or simple, even if it's not finished yet, bring you project next month and show your stuff. Other Rats can benefit from your experience by showing what you've done. Plan on inviting a ham buddy!

73, Paul Drexler, WB3JYO

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DEADLINE FOR ARTICLES AND SWAP SHOP IS THE MONTHLY MEETING DATE. NON-COMMERCIAL SWAP SHOP ITEMS-FREE OF CHARGE.

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(609) 783-9478

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(215) 355-5730

### PACKRAT 222 MHz REPEATER - W3CCX/RPTR

222.98/224.58 MHz, Churchville, PA

### OFFICERS: 1993-1994


PRESIDENT: WB3JYO, Paul Drexler  
VICE-PRES: WB2OMY, Gary Hitchner  
REC. SECR: WA3AQA, Walter Zumbach  
TREASURER: WA3JUF, Dave Mascaro  
COR. SECR: N3AOG, Dick Comly  
DIRECTORS: N3EXA, Brian Taylor (1 YR)  
K3ESJ, Bill Jaxheimer (1 YR)  
WA3AXV, Ron Whitsel (2 YRS)  
WB2YEH, Bob Fisher (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

### COMMITTEE CHAIRMEN

LADIES' NIGHT: WA3YUE 215-666-1558  
JUNE CONTEST: WB3DNI 215-672-5289  
HAMARAMA: WB3JYO 609-538-1687  
VHF CONFERENCE: KB3XG 215-270-3158

THE AMERICAN RADIO RELAY LEAGUE**OST**

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*"Gisele"*  
**K3WAJ**

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**Lynne D. Whitsel**

209 Frog Hollow Road  
Churchville, PA 18966  
215 355-5730

## Calendar of Coming Events -March 1994

- 5 **Shore Points ARC Springfest 94** at Holy Spirit High School, Rte 9, 1/2 mile S. of Rte 30 in Absecon, NJ. TI on 146.385/.985.
- 5-6 **ARRL International DX Contest (phone)**. See page 125 of the Dec. Issue of QST for rules.
- 5 **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.
- 10 **Packrat Board of Directors Meeting** at the QTH of Brian, N3EXA. All interested parties welcome. Starts at 8:00 P.M. Call 215-257-6303 for directions.
- 13 **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**.
- ~~18~~ 17 **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**.
- 26-27 **Timonium Md. ARRL Maryland State Convention and Greater Baltimore Hamboree and Computerfest** at the Maryland State Fairgrounds. VE exams given. Talk-in on
- 27 **First Day of Passover**
- May
- 14 **Ladies Night** at the Mill Race Inn in Holland, PA. Mark your calendar.

### VISITORS AT THE FEBRUARY MEETING

N3OWE, Victor Lees, Schwenksville, Pa.  
KA3WXV, George Altenus, Lansdale, Pa.  
N3GDQ, Carl Krause, North Wales, Pa.  
WA3RLT, Ben Kesel, Unionville, Pa.  
N2NSR, Brett Carpenter, Titusville, Pa.  
N2NGU, Eric Carpenter, Titusville, Pa.

### TID BITS

Harry, K3HZO, recently moved to Shillington, Pa in FN20. He's on 50 through 2304 MHz and is planning on putting his 144 and 1296 MHz EME arrays up in the spring.

Dave Meier, N4MW, is looking for papers to be presented at the Central States Conference in Memphis, Tennessee on July 29-31, 1994. Contact Dave at 3205 Covington Pike, Memphis, TN 38128-5017.

QRZ Antartica. The VHF-UHF DXer reports VK3OT working VK0AQ at Casey Base in Antartica. VK0 AQ is reported to be running a beacon from grid OC53MM on 50.200 MHz running 50 watts into a 3 element yagi pointed at VK5.

### HEALTH and WELFARE

Bill, NF2L, ex president of the Packrats is recovering from bypass surgery.

Warren, WA2ONA's, son is back in school.

## 1994 CRYING TOWEL WINNER ACCLAIMED

Walt, WA3AQA, again became the winner of the 1994 Crying Towel Award presented at the February club meeting. The judges were in tears after his pitiful tale. It seems like Walt has perfected his ability to get into trouble. I will not attempt to embarrass Walt by giving a list of his mis-accomplishments and bad fortune however they are included in the summary of problems reported at the end of this note.

Len, N3NGE, and Doc, W3GAD, got honorable mentions for their attempts to bring extraneous problems into their tales such as the birth of a son (congratulations Len) and a wives sick horse. For those that might want to learn something about what problems to avoid or to add to their repertoire of things to cry about, some of the problems reported are listed here. Some were reported by several rats and are perennial favorites so it may not be true that we learn from past mistakes. Some of the problems encountered: Smoked 2 meter linear just before the contest, a bad microphone on the 220 rig required the bad voltmeter to be get repaired before being used and then repairing a soldering iron to resolder a bad connection and then found that it was really a bad relay (are these the same guys that charge me enormous bills for fixing my car?), found that long range planning is a myth, third tower for a 4 op multiop didn't get up until the weekend just before the contest, friend with computer for logging never showed up, rotator died on the temporary tower, had wrong antenna connected for 903, 2 meter preamp suffered too much tx power, 2 hour rotator replacement required 6 hours, bent over mast for 2m vertical and 6 meter beam, 2 meter antenna damaged in wind storm, had to use broomstick for 903 antenna boom, single op found out why he had gone multiop on previous contests, UHF contest operation without a 2 meter liaison frequency is a severe handicap, ice on tower and antenna required a blowtorch for removal, water flowing through the operating area, too many amps connected to a too small of a fused ac line, amp tuning capacitor knob broke off, blown Z50 choke, lost one side of the 220 line coming to the house, diarrhea, 223.5 amplifier caught fire (literally), wives water broke Sat. morning of the contest, traffic jams, 2 and 1/m minutes between contractions, 2 day air delivery of new crystals required 9 days, up all night getting 10 GHz rig working including building a 400 Hz ac supply and then getting one contact, mast on outrigger for 10 GHz antenna farther away than arm's reach, found that IC237 12 volt dc input cannot handle 110 v. ac, burned up 2nd 903 amp, bad 432 transverter, push-up mast for new antenna came apart while being erected with two 10 ft sections and antenna were up, lap top for logging crapped out, worked Maritimes during 6 m opening with attic mounted squalo but couldn't work the locals, 2m FM operation unsuccessful with rig set for repeat, furnace switch open, horse sick, furnace switch out again, and replaced leaky furnace pump.

### NEW or CORRECTED PHONE NUMBER

Bruce, WA3YUE, 215986-3654(W)

Scott, N3GSA, 215-538-7831(H)

### NEW MEMBER

Bill Gorodetzer, K3MFI

25 Fawn Drive

Holland, PA. 18966

215-968-2504

### SWAP SHOP

(Send all ads to the editor)

**WANTED:** 10 foot diameter parabolic reflector (ex TVRO is OK) for use on 23 CM EME. Contact Harry, K3HZO at 610-796-8543.

**FOR SALE:** Kenwood TS-680S, good condition, \$750.00, Yaesu FTV-901 144 and 432 MHz Transverter, good condition, #300.00, Heath SB 610 Monitor Scope, \$50.00, HB 6M Kw Amplifier ( from VHF Handbook), 3-500Z with power supply and coax relay, \$500.00. Contact Mike, N3BBI, 717-325-3580.

**FOR SALE:** Modular Power Supplies, regulated except as noted, all 115v, 60 Hz input with no meters:

Mfg	Output Voltage	Current (amp)	Size (in.)	Cost(\$)
Lambda	0-60	0.20		15
Ascopian	0-30	1.6	9X5X3.5	15
Ascopian	24 unreg.	5.0	5X6.5X3.5	15
Ascopian	+/- 15	1.0	5X3.5X5	15
Sorensen	+/- 15	0.80	6.5X3.5X4	15
Ascopian	40	0.040	6.5X5X4	15
Power Mate	24	1.5	3.25X5X4	15
Ascopian	0-15	3 adj. limit	9.5X3.25X5	20
Sorensen	28	3.5	9.5X3.25X5	20
Ascopian	0-30	2.5	3.5X5X13	20

Contact: Gary, WA2OMY at 610-539-6409.

Several members of our club have expressed interest in obtaining information on starting a test bench in one corner of the shack or at least picking up a few test instruments at flea markets, or through the want ads such as the Ham Trader or Nuts and Volts etc.

Your editor came up with the idea that a periodic column in Cheesebits would be a good way to offer some guidelines on what to look for, some pitfalls associated with certain instruments, general pricing, etc. This column will try to cover one type of test equipment per month, such as power meters, signal generators, etc.

I do not claim to be an expert on this subject. In the past 30 or 40 years, there have been hundreds of models of various equipment manufactured, probably Jim Tucker himself is one of a few who could claim to have seen everything. I have used or seen most of the more popular models around, which you will likely run across at a flea market. If somebody has something in use that should be considered, give me a call or jot it down and I can mention it in the column.

A few words on pricing. I am not going to suggest any exact price on a particular piece of equipment. Price varies with age, condition and at flea markets, plain luck. It also depends on whether or not you can justify the cost for a hobby at home. Another thing to remember is that test equipment appears to lose value much faster when compared to Ham equipment. One bright spot is it may be a really good time to be shopping for older instruments. Anybody attending the flea markets in the past couple of years can recall the large trucks unloading enough equipment to cover a large portion of real estate.

One thing we all ask at one time or another, either over the phone or at a hamfest is: does it work? Remember, there is a big difference between turning on a piece of equipment and observing a deflection on the meter or seeing a trace, and using it to make repeatable meaningful measurements. I use common sense and look at the overall condition to determine whether or not to buy something. I rarely have had trouble with electronic equipment not working when it looks good and somebody has assured me it was ok. At a flea market obviously a lot of old test equipment may not look very good, or you know it was part of a big load unloaded from a truck. There the price will normally match or you can bargain for one which you feel comfortable with.

Lets take a look at some thru-line wattmeters. If anybody is running several amplifiers on different bands a wattmeter is a necessity. Of course the Bird model 43 is on everybody's wish list. Have you checked the price of a Bird 43 recently with a couple of detector slugs thrown in? There are some alternatives. The Sierra corporation made wattmeters for a number of years which uses plug-in slugs and a line sampler. The model 164B is one to look for. Some of these also have the Philco name on them. The VHF slug has a switch on the top which selects scales of 10, 50, 100, 500 watts full scale, more convenient than the Bird. However the 164B is larger, weighs more however should be much less costly. I would be careful buying one without the sensor though, there are probably many more wattmeters around than sensors to fit in them. It also has a control on the top which can be set to read VSWR.

One way to have the compatibility with the Bird slugs would be to try to find a separate slug cavity. These have been showing up in increasing numbers without the case. Even if you do not find a meter you can use standard microamp meter. The model 43 slugs are designed to use a 30 microamp meter movement with a 1400 ohm internal resistance. Try to match it as closely as you can but don't expect to find very many exact replacements at flea markets. Calibrate it with a loaner 43 and mark the new meter face as appropriate. If you are lucky enough to find several they can be mounted right on the back of your amplifiers like a built-in wattmeter. Spare parts are still available from Bird and the connectors are a standard stock item at most Bird dealers.

Another through line wattmeter I found is a unit manufactured for the US government. The Standard Electronics ME-120/U is a 25-1000 MHz unit which can be selected to read scales of 30, 75, and 250 watts, direct (forward) and reverse. There is also an optional remote sensor which will plug in to cover the low bands through 30 Mc.

That's all for this month. Next I will present some ideas for finding meters to measure low power at microwave frequencies.

### **ADDRESS CHANGE**

Walt Rauscher, N3EUV  
2904 Turner Avenue  
Roslyn, PA 19001  
215-885-9145

John Sorter, KB3XG  
1214 North Trooper Road  
Norristown, PA 19403  
610-584-2489(H)  
215-260-5616 (Car)  
215-822-2596(W)

# NEW YEAR'S RESOLUTIONS\*

By Rich, N0HZJ

How about 1994? I would bet it will be even more exciting than 1993 if we all work at it! How about making a few New Years Resolutions with me?!

- 1) I will call CQ on the bands a few times each week (when was the last time that you called CQ on 222 or 432 outside of a contest?) and point my antennas in all directions to look for activity.
- 2) If I hear a station calling CQ I will answer them and at least say "hi". How many people have you heard say that there is no life on the VHF/UHF bands? I think there are quite a few people listening each night and weekend that are saying "Oh that is just Rich in EN34, I can work him anytime." Rich may get disgusted because he doesn't work anyone and sell his gear.
- 3) I will encourage new stations and take time to ask them questions and answer their questions. I have heard operators referring to some of the new codeless techs as CB'ers. Some of the new operators don't have all the skills and some don't know how the VHF bands work. They will need our help and encouragement!
- 4) I will try something new during this years contests. How about grabbing some friends and trying a multi-op? Maybe you don't have the big power and antennas to compete with the "big guys". Grab your 10 watt QRP portable! How about a small rover trip?

I am confident 1994 will be another great year for VHF/UHF/Microwave activity in the Upper Midwest. We may not win all the contests, make every sked we make, or work every grid we want but..... **LET'S HAVE FUN TRYING!!** Happy New Year!!

\* Editors Note: Rich is the editor of the Upper Midwest VHF/UHF Newsletter that serves a wide area surrounding the Minneapolis area. Many of us were able to work some of the active hams in this area during the brief opening we had in the January contest. I've extracted a portion of Rich's January 1994 editorial. The resolutions are worth all of us making.

## Hints and Bits

### Power output monitoring

Few Amateurs have a Bird 43 dedicated for use on every band or even one good Microwave power meter to use above 432 MHz. The idea of using a current meter to indicate power output is certainly not a new one. Yet is often overlooked or ignored as a real easy monitor for transmitters.

Adding a current meter in series with the TX amplifier's DC supply or in series with the whole transverter is easy. One can be used for each band, on any band, even 10 GHz. Have someone measure the actual power output with a real power meter and record the IC drawn by the amplifier. Then use current meters in your shack to monitor TX output. Don't forget, low current meters can be made to read Amperes by adding a shunt in parallel.

de WA3JUF

## CHEESEBITS SUBSCRIPTIONS

Cheesebits subscriptions are available to everyone interested in activities and information from the VHF through the microwave frequencies. Subscriptions are for 1 year of 12 issues. For a subscription, send the following information:

Name: \_\_\_\_\_ Call: \_\_\_\_\_

Street Address: \_\_\_\_\_

Town: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Subscription Rate: \$10.00 per year (USA), \$12.00 (Canada), \$15.00 (Worldwide)

March 94                      Send to:                      SUBSCRIPTION/ADVERTISING MANAGER:  
Bob Fischer, WB2YEH  
7258 Walnut Avenue  
Pennsauken, NJ 08110

The following item from Internet was provided via Packrats WA3AXV and WA1YHO

(This message came off the internet from an unidentified source.)

A report is calling for 50 megahertz (MHz) of radio spectrum primarily used by the Defense Dept. to be transferred to the Federal Communications Commission (FCC) this summer for auction to private industry.

The report outlines a 15-year period to phase in plans to transfer an additional 150 MHz of government spectrum to the FCC.

The 50 MHz transferred in August roughly equals the amount of spectrum used by entire cellular telephone industry. Currently, the bands are used primarily by the military for airborne telemetry and radar testing systems such as target scattering and enemy radar simulators.

The Commerce Dept. submitted the preliminary report to the president, Congress and the FCC, and asked for comments within 90 days on transferring the 150 MHz. A final report on releasing the spectrum is scheduled is scheduled to be issued next February. Comments will not be sought on the 50 MHz slated to be released this summer.

Commerce Dept. officials said the Defense Dept.-which uses the majority of the 200 MHz-was consulted about the reallocation in "extensive discussions." But they admitted Pentagon officials are less than pleased at having to give up spectrum. "There is very little flexibility left in terms of DOD spectrum," a Commerce official told The DAILY. "I think the DOD would take a very hard line on further erosion."

The bands contained in the 150 MHz slated for a phased reallocation are currently used by DOD for long-range air defense radars, airborne telemetry, tactical radio relay communications, test range aeronautical telemetry and telecommand, and Navy air traffic control radars. The 15-year reallocation period would allow "orderly phaseout" of certain equipment and procurement of replacement equipment, as well as give time for related requirements, such as the installation of filters on high-powered DOD and Federal Aviation Administration (FAA) radar transmitters to prevent their interference with commercial activities in 1390-1400 MHz.

However, satellite operators could find the reallocated spectrum attractive for a variety of uses, including inter-satellite links and ground-to-satellite uplinks and downlinks, a Commerce official said.

**Preliminary Spectrum Reallocation Plan**  
Reallocation Bands            Reallocation Status Schedule

Reallocation Bands	Reallocation Status	Schedule
1390-1400 (MHz)	Exclusive	January 1999
1427-1432	Exclusive	January 1999
1670-1675	Mixed	January 1999
1710-1755	Mixed	January 2004
2300-2310	Exclusive	January 1996
2390-2400	Exclusive	August 1994**
2402-2417	Exclusive	August 1994**
3650-3700	Mixed	January 1999
4635-4660	Exclusive	January 1997
4660-4685	Exclusive	August 1994**

\* Exclusive = exclusive non-federal use  
Mixed = shared federal government and non-federal use

\*\* Will be given to the FCC in August for allocation to industry

625 Exeter Road  
Lebanon CT 06249  
February 8, 1994

Dear Harry,

I am sure you and the Pack Rats have been involved with the controversy over the Rover rules in the ARRL VHF contests. You probably also know that K9AKS, W3EP, and I wrote the original Rover and Limited Multiop rules when we were writing the VHF Contesting column in *NCV*. We could not possibly think of all the ways the spirit of the rule could be abused, but it seems that nearly everyone is generally agreed about what the limits ought to be.

Now I wonder if the Pack Rats have made a stand on the issue or submitted a formal proposal to the ARRL Contest Advisory Committee? It would help a great deal if influential clubs and all VHF contesters came to some generally agreed on position to spur the CAC to make a definite recommendation to the ARRL Awards Committee, which does have the final authority in the matter.

If the club has not taken a stand, perhaps you would consider the formal proposal of a fellow Pack Rat. I sent the enclosed proposed rules change to the Contest Advisory Committee as a private person, so to speak, but I hope it represents a consensus solution to all of the major complaints about the rover class. (I will not be discussing it in my column.)

You can publish it in the newsletter if you want or show it around, as you wish. Those who support it would help the cause by sending a note to the CAC with a specific request that the comments be forwarded to the committee chair and all the other committee members. The address is:

ARRL Contest Advisory Committee  
225 Main Street  
Newington CT 06111

Regards,



Emil Pocock  
W3EP

### Proposal for Modifying the Rover Class Rule in the ARRL VHF Contests.

February 8, 1994

Emil Pocock, W3EP, Box 100, Lebanon CT 06249

**Rule 1 (C) Rover:** A rover consists of one or two operators of a single station that moves among two or more grid locators during the contest. A rover vehicle may transport only one station using a single call sign; thus a rover may not operate with multiple call signs under the family rule 7(C). Rover vehicles must transport all the equipment, power supplies, and antennas used at each operating site. This rule is not intended to prevent an operator from using the same call sign to submit separate logs for single-operator (fixed-station) and rover-class entries. Rovers add "rover" on phone and /R on CW after their call signs.

**Rule 4 (D) Rovers only:** The total rover score is the sum of the scores made from each grid locator. Submit separate logs for each grid where operating sites were established and score them individually, as explained in paragraphs (A)-(C) above. Then add the scores from each grid on the summary sheet for the total rover score. Rovers are listed in the published contest results under the division from which the highest aggregate score was made. (For the January VHF Sweepstakes only: Rovers entering club competition must indicate the grid locators where operating sites were within 175 miles of the club's center. Only scores made from those grid locations count for club competition.)



Mt. Airy VHF Radio Club Inc.  
The Packrats  
January 1994 VHF Sweepstakes Contest

Total Logs 53

Total Club Score 1431850

Call	Contacts and Grids per band												Totals		Score				
	50Mhz	144Mhz	222Mhz	432Mhz	903Mhz	1.26Mhz	2.36Mhz	3.46Mhz+up	Contacts	Grids									
WA3NUF	117	24	254	31	80	19	104	23	33	10	41	11	18	4	15	4	662	126	163674
WB2VEH	68	12	232	26	76	14	93	13	39	10	39	8	15	3	10	2	572	88	101200
WB3JYD	97	18	177	21	68	13	88	16	35	8	37	8	16	4	4	2	522	90	93080
WA3AIV					93	15	155	19	44	10	54	13	26	8	22	7	394	72	91584
N2SB	69	18	170	20	63	14	63	11	29	6	39	9	18	4	10	3	461	85	83895
WB3DNI	52	10	187	20	43	11	79	15	33	6	32	7	14	3	13	4	453	76	72884
WB3KRW	78	22	259	26	75	17	119	21									531	86	62350
KB3IB	78	17	105	23	52	13	56	10	31	8	35	7					357	78	91714
WA3JUF	54	11	112	12	58	10	64	11	25	6	36	10	14	4	2	2	365	66	51612
AK3D	76	12	127	16	58	8	58	9	26	5	30	5	13	2			388	57	43491
WA2OMY			152	21	60	9	65	16	21	6	17	4	17	7			332	63	43470
W3KKN	86	16	130	8	95	8	47	8	25	3	35	7	16	3			394	53	41764
KB3OM	67	20	128	25	25	12	39	17			4	3					263	77	26103
K3IUV	63	12	104	15	61	8	62	9			17	2					307	46	22126
N3A0G	49	6	101	11	37	3			26	5	28	5	12	2	9	4	262	36	21888
W2EIF	9	4	102	17	42	7	38	8	12	4	8	4	3	2			214	46	17250
WA3AQA	78	12	136	13	54	7	53	6									321	38	16264
WB2ZAR	59	16	119	16	24	6	34	6			11	4					247	48	16224
WA3END	70	15	177	16	34	2	48	6									329	39	16029
K3DMA	77	16	114	9	49	5	43	3			15	3					298	36	15660
W3BIB	28	7	143	16	41	7	29	6	15	3							256	39	14469
K3IIT	52	12	167	13	39	4	45	6									303	35	13545
N3MGE	23	8	51	12	36	12	35	10	12	8							157	50	13200
KB3IG					36	4	35	7	18	5	21	5	10	1	6	2	126	24	10224
ND5BRP/R	55	15	108	16	27	6	11	5									201	42	10038
W3GAD	31	7	161	23													192	30	5760
K3EDZ			93	14	34	3	34	4	6	1							167	22	5566
K3USA	43	10	72	10	18	2	19	5									152	27	5103
WA3YUE	12	2	47	5	27	6	21	4	8	3	6	3					121	23	4853
K3ESJ	23	5	89	11	27	5	17	3									156	24	4800
WB2VLA	35	7	49	10	20	3	18	5									122	25	4000
W3HFF	25	2	18	5	23	3	28	6	7	2	4	2					103	20	3780
WA3IAC			54	5	26	4	20	3	12	2							112	14	2716
N3BBI	41	14	44	7													85	21	1785
N2DED			116	14													116	14	1624
K3PHY			102	4	23	2			9	2							134	8	1472
W3HK	40	6	19	6	5	1	9	3									73	16	1392
K52T	63	13			2	2											65	13	1005
W3RHU	36	10	19	5	2	1											57	16	944
WA2GFP			76	4	29	2											105	6	804
N3CIU	39	6			28	2											67	8	760
K3NGB	7	3	32	5	7	4											46	12	636
N3OZO			29	9			4	1									33	10	370
NR3P			22	3	6	2											28	5	170
K3BPP			20	2	5	1											25	3	90
K3VED	1	1	13	3													14	4	56
N3BSA			22	2													22	2	44
W3AJF					9	2											9	2	36
N3EUV					3	1											3	1	6

Multi-Ops Call	Contacts and Grids per band												Totals		Score				
	50Mhz	144Mhz	222Mhz	432Mhz	903Mhz	1.26Mhz	2.36Mhz	3.46Mhz+up	Contacts	Grids									
WORSJ W/WORSJ, WJ3H, WB2DMA, W1PV, WA3YUE, & NET	174	26	306	32	66	16	74	17	21	8	35	11	11	4	5	5	692	119	132328
N3EJA W/N3EJA, KY3T, N3GSA, KB3AOI	92	21	218	19	69	15	90	13	16	4	21	4					506	76	58976
N3IIT W/N3IIT, N3OZO, W3JI, N3PER, K3FHD	105	19	241	22	45	5	114	16	9	1	23	5					537	68	53856
K3EOD W/K3EOD, WA3IAC, KURT ROBINSON	64	10	186	15	52	6	71	7	12	2	14	2					399	42	25200



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4 Feb 94

Dear Tim:

Thank you for your involvement in the CAC and your interest in the VHF rover issue. I regret not responding sooner regarding the proposed rover scoring criteria; the recent ice storm prohibited us from holding our monthly club meeting. I am responding based on previous discussions with the membership and a quick polling of the board of directors.

As you and I have discussed there are a number of possible solutions to the present rover scoring inequity. The CAC's proposal of 12 January tackles the problem by simply stating that rovers shall not engage in grid circling. While this targets the grid circling problem, we believe that this type of solution will be very difficult to police and enforce. Additionally, it only addresses one issue - that of grid circling.

We have arrived at two possible solutions that would be far easier to enforce, and in fact do a better job of solving the fundamental issue of rover scoring inequity:

1. Prohibit rovers from working other rovers.
2. Change the rover scoring so that rovers cannot count a grid multiple times simply by moving to a new location. The rovers can still however add up their points for each time they work a particular station from a new location. This will put the rover scoring more in line with that of a fixed station.

Neither of the above changes will discourage rover activity. An individual operating as a rover is usually providing contacts to his local ham buddies from a rare grid location - the satisfaction of providing a rare grid for others far outweighs the satisfaction a rover obtains from accumulating an inflated score.

We look forward to further discussion on this issue.

73, Paul WB3JYD

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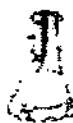
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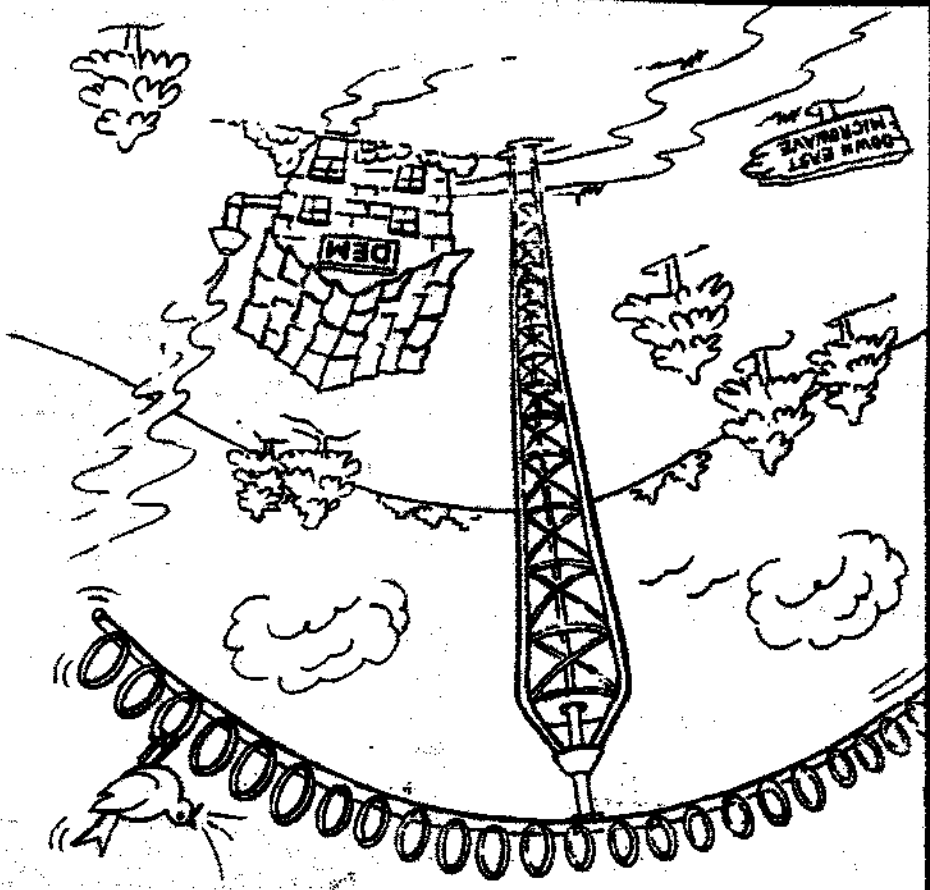
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