

# CHEESE BITS



**W3CCX**

CLUB MEMORIAL CALL

SCANNED TO PDF BY BERT, K3IUJ, 2013



ARRL  
Affiliated  
Club

VOLUME XXXX

July 1998

Number 7

## THE PREZ SEZ

Another year has zipped by. The officers of the club have been re-elected for one more term. We have two new directors. I will continue to seek the support of the membership to make a great radio club even greater. We will make it a priority to seek new members and to try and improve the participation in club events. If you have some activity that you think the club should be doing or if something the club is already doing really bothers you, speak up to the board. We will work with you to change what needs changing. Your constructive participation in improving the club is always welcome.

The June contest is now history. The club station on Camelback Mountain was another outstanding club effort by the Pack Rats. Participation by club members far exceeded any in recent memory. Al, N3ITT, is to be congratulated for planning, organizing and executing the club's participation in the 1998 ARRL June QSO Party. Many people worked especially hard to make sure that all the work got done. You, the membership, should be proud of your accomplishment. Even the propagation gods were smiling, particularly on 6 meters, and the club did the best total score ever in a June contest. We had some technical problems on some of the bands or the score would have been much higher. Remember the Pack Rats do this without a bunch of captured, 'shooting ducks in a barrel', type rovers to artificially pump up the score. Artificial in the sense that the captured rovers only work the "mother" station, take time from the mother microwave stations to make 'real' contacts and in short, turn what is supposed to be a radio skills contest into a contest decided by who can field the most resources. The real "rover problem" has yet to be addressed by the League and the Contest Advisory Committee.

This month's meeting is the club's popular "White Elephant" sale. Webster's defines a white elephant as "a property requiring much care and expense and yielding little profit". That pretty much sums up the flavor of the meeting. This meeting is an old fashion auction of items that are usually of dubious value. But there is always the thrill of perhaps finding a 'sleeper' for a really good price. This is a lighthearted meeting held outdoors at the QTH WA2OMY in the Eagleville area of Montgomery County. Bring a friend and bring some white elephants for sale. The club takes a small donation for all items sold. It's really a small donation, so who knows, you could wind up with a whole dollar, or maybe even two, in your pocket at the end of the night.

73, Ron, W3RJW

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## MEETINGS

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

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

222.98/224.58 MHz, Churchville, PA FN201E

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 W2SJ (1 Yr) Bob Fischer, fns157a@prodigy.com

**MONDAY NIGHT NETS**

TIME	FREQ.	NET CONTROL
7:30 PM	50.150 MHz	K3EOD/WA3EJUD
8:00 PM	144.150 MHz	N3ITT
8:30 PM	222.125 MHz	W2SJ
8:30 PM	224.58R MHz	W3GXB
9:00 PM	432.110 MHz	W3RJW
9:30 PM	1296.100 MHz	WA3NUF/AA2UK
10:00 PM	903.100 MHz	N3AOG

**COMMITTEE CHAIRMEN**

LADIES' NIGHT: N3AOG 215-443-9965  
 JUNE CONTEST: N3ITT 610-847-5490  
 HAMARAMA: NK8Q 610-847-2285  
 VHF CONFERENCE: KB3XG 610-584-2489

**PACK RAT BEACONS - W3CCX/B FM29JW**

50.080 144.284 222.065 432.295 903.072 1296.251 MHz  
 2304.037 3456.220 5760.200 10,368.200 MHz



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## JUNE CONTEST , RETURN FROM THE MOUNTAIN!

by: AL N3ITT

Well another June contest is behind us, (the Pack Rats have returned from the mountain, leaving in their wake a super successful and outstanding contest effort. Anyway you measure it, this years effort was by far the best ever!! This year we had more members and guests then ever before, with some 31 participants thru the contest period many who were there thru the duration, braving the worst conditions we've ever had on Camelback! With all this help it was easier than ever to set up and operate thru the contest without anyone having to overdue it. Most seemed to agree that it was nice to have as much (or as little) operating time as they wanted, with plenty of time for socializing (or drying clothes) and still keep all the bands up and running thru the contest. Thanks to all who helped load up, drove trucks, helped set up, operate, tear down and unload almost all in the pouring rain. Special thanks to all those who were band captains and made sure all the equipment was there for their bands, often ripping out large parts of their shacks in the process, and of course Doc and Co. who kept us well fed through our stay.

I must admit ,on Friday morning when I awoke to rain, with wx reports of more to come all weekend I thought this would be a disaster with many doing the sensible thing and staying home. Boy, did I underestimate this group!!!!!! With very few exceptions, everyone on my list showed up. It was also great to see all the new members show up, many for their first time adding new enthusiasm to the effort. Hope you guys had fun and the weather won't dampen your enthusiasm for next year. Hi!!

The unsung heroes including visitors, operators and loggers were: AA3GN, W3HT, KIDS, W3KM, K2UT, K3ESJ, WA3YUE, K3LIC, KF6AJ, KU3T, N3DG, N3EVV, N3EXA, N3ITT, N3NGE, N3OZO, N3XEM, NE3L, NK8Q, W2SJ, W2SK, W3GAD, W3RJW, WA1YHO, WA3NUF, WA3RLT, WB3JYO, WF3W, WU3C, WA3DRC and N2SCJ.

I'd like to also thank all those who, for health or other reasons, could not come up to the site, took the time to work W3CCX on many bands, the club station worked more packrats than ever before, you DO make a difference! Also thanks to the guys who donated equipment but could not attend.

Before the contest, Ron (W3RJW) wrote an article on inspiration. No doubt inspiration is the spark that gets us going, but it takes two more things, dedication, and determination to generate the fire of success, believe me, there was no shortage of any of these elements in this year's June contest.

Last, but not least, thanks to those who came back to my QTH after the contest and got all my stuff away when I broke my wrist and W3KM who got the truck back and prepared the log.

### HEALTH AND WELFARE

Ernie, W3KKN, has had a rough time the last couple of weeks, but is now on the mend. He had a blood clot in his leg. If the clot broke free it would kill him and they could not seem to dissolve it so they removed his leg at the knee. He is still in Holy Redeemer Hospital in Mcadowbrook, PA (Huntington Valley). He feels well enough to accept calls or visitors now. He is in Room 376. The number is 938-2376 direct to his room.

### CALENDAR OF COMING EVENTS - JULY 1998

- 4 **Independence Day**
- 9 Packrat **Board of Directors meeting** will be held at the QTH of Ron, W3RSJ at 8:00 PM. All interested parties welcome. Call 215-252-5730 for directions or look for the directions elsewhere in Cheesebits.
- 11 **CQ Worldwide VHF QPX Contest**. See June CQ Magazine, pg. 93. Contest runs from 1800 UTC, 12 July to 2100 UTC on 13 July (27 hours). All bands from 50 MHz up.
- 11-12 **CQ WW VHF Contest**. For rules see July QST, page 98.
- 12 **Valley Forge Hamfest 98** will be held at the Kimberton Fire Co. Fairgrounds (near Phoenixville, Pa.). Talk-In on 146.66/.06 and .52. Check <http://www.marc-radio.org/hamfest.html>.
- 16 July meeting of the Packrats will be the **Annual White Elephants Sale** at Gary's Glen (WA2OMY's QTH) on Mt. Kirk Road in Eagleville, Pa. Starts promptly at 8:00 PM. Bring Chairs. For directions call 215-539-6409. See the enclosed map.
- 23 **LEAP INTO THE MICROWAVES** with the Packrats! 903 and above. Starting on the 4th Thursday of the month and continuing every 4th Thursday of the month operate from 8 to 10 PM local time on any band 903 MHz and above. For coordination on those difficult long haul contacts 144,260 MHz is the suggested liaison frequency. So here's your chance to fix what broke in the contest and work all those stations you missed.
- 24-25 **The 32 nd Annual Central States VHF Conference** will be held in Kansas City, MO at the Adam's Mark Hotel. For further information, contact Idemise, AJ0E or Tom, K0TLM, e-mail: [aj0e@juno.com](mailto:aj0e@juno.com).
- 26 **Maryland Hamfest**, Timonium, Md. at the Maryland State Fairgrounds, located on York Rd. adjacent to I-83 near I-695 Talk-in on 147.63/.03, 146.16/.76, and 146.52. VE sessions.

## AMATEUR RADIO SPECTRUM PROTECTION BILL HAS 39 COSPONSORS

from the ARRL Letter, 6/26/98, Part 1 ...

ARRL Legislative and Public Affairs Manager Steve Mansfield, N1MZA, reports that HR 3572, the Amateur Radio Spectrum Protection Act, now has 39 cosponsors (including the original sponsor) and several more members of Congress have indicated their intention of signing on. "Letters from ARRL members are beginning to take effect," Mansfield says.

The bill, introduced March 27 at the request of the ARRL, would protect existing Amateur Radio spectrum against reallocations to or sharing with other services unless the FCC provides "equivalent replacement spectrum" elsewhere. The bill was introduced by Rep Michael Bilirakis of Florida, a Republican, with the cosponsorship of Rep Ron Klink of Pennsylvania, a Democrat.

Cosponsors also now include Peter DeFazio and Earl Blumenauer of Oregon; George Nethercutt of Washington; Frank Pallone of New Jersey; Tom Campbell and John Doolittle of California; Patsy Mink of Hawaii; David Hobson, Tony Hall, Steven LaTourette, Michael Oxley, and Dennis Kucinich of Ohio; Bob Clement of Tennessee; Dave Weldon of Florida; David Price of North Carolina; Robert Wise of West Virginia; Michael Crapo of Idaho; and Jay Dickey of Arkansas.

Others are Representatives Dan Burton of Indiana; Louise Slaughter, Sue Kelly, Michael McNulty and Peter King of New York; Charlie Norwood, Nathan Deal, and John Lewis of Georgia; Bud Cramer of Alabama; Christopher Shays of Connecticut; Collin Peterson of Minnesota; James Talent, Jo Ann Emerson and Ike Skelton of Missouri; Dale Kildee and James Barcia of Michigan; J.C. Watts Jr of Oklahoma; Scott Klug of Wisconsin; and Jon Christensen of Nebraska.

The bill points out Amateur Radio's basic purpose as a "voluntary, noncommercial radio service" that has "consistently and reliably" provided emergency communication during and after disasters. The measure notes that the FCC has "taken actions which have resulted in the loss of at least 107 MHz of spectrum to radio amateurs."

HR 3572 has been referred to the House Commerce Committee. An effort is under way to enlist additional cosponsors for the measure. Amateurs are encouraged to contact their Representatives and urge them to support the bill or to sign on as cosponsors. The full text of the bill is available at <http://thomas.loc.gov/cgi-bin/query/z?c105:HR.3572>.

Mansfield is continuing to seek additional cosponsors for HR 3572 and urges individual hams and clubs to contact their representatives in Congress and encourage them to sign on.

## ARLB046 FCC AMENDS RULES FOR U-NII DEVICES ON 5 GHz

The FCC has amended its rules for Unlicensed National Information Infrastructure (U-NII) devices operating in the 5-GHz range under Part 15 of the Commission's rules. In 1997, the FCC made 5.15 to 5.35 and 5.725 to 5.825 GHz available to U-NII devices under Part 15 of its rules. Amateur Radio shares part of the spectrum involved, from 5.650 to 5.925 GHz. U-NII devices would provide short-range, high-speed wireless digital communication.

In response to industry petitions for reconsideration and clarification, the FCC has amended Part 15 to permit fixed, point-to-point U-NII devices in the 5.725 to 5.825 GHz band to operate with up to 1 W maximum transmitter output power and directional antennas of up to 23 dBi gain. The Commission will specify transmit power limits as a function of the channel bandwidth. A logarithmic equation would determine the power permitted. "This action will not increase the maximum power permitted by U-NII devices, but merely scale permissible maximum power to the bandwidth used," the FCC said.

The FCC said it will consider higher gain antennas for U-NII devices for longer-range community networking. In its comments, the NTIA expressed concerns that high-power government radar systems could interfere with the unlicensed devices, but otherwise supported the use of higher-gain antennas for fixed, point-to-point U-NII devices in that band.

The ARRL has argued that longer-range links will interfere with amateur operations and are a significant departure from Part 15,

which requires that interference potential of unlicensed devices be subject to "reasonable regulation" so as to not interfere with licensed services. One industry petitioner, Apple Computer, said the ARRL has not demonstrated that U-NII devices present any real threat of interference to ham operation.

The FCC said it would maintain the power spectral density limits adopted in the original report and order.

The FCC also revised its rules to express U-NII out-of-band and spurious emission limits in terms of absolute radiated power levels, regardless of antenna gain.

The FCC advised manufacturers "to consider the proximity and the high power of non-government licensed radio stations," including amateur stations, when choosing operating frequencies during the design of their equipment.

The complete text of the FCC Memorandum Opinion and Order, released June 24, is available on the FCC Web page at <http://www.fcc.gov/Bureaus/EngineeringTechnology/Orders/1998/fcc98121>.

## 6M ANTENNAS / HEIGHTS

From the wsvhf reflector by George Fremin III, K5TR <geoiiii@kkn.net>

I have been reading the thread on 6 meter antennas with interest. First I have to say that I come from (for the most part) an HF contest background. I have been very lucky in that I have operated from stations with a lot of antennas at different heights. You can see what I mean by going to: <http://www.kkn.net/~k5tr/> and "touring" some of these stations.

I have done the June vhf contest over the years from WB0DRL (3 times) and now from W5KFT's station - where I have gotten to see the station the way I think it should be set up.

I think that 6 meters is VERY much like 10 meters and the lessons that are learned on 10 meters can be applied to the design of a competitive 6 meter station.

Several of the previous posts talk about "low" antennas - and although 30 or 40 feet might be "low" it is not really that low in terms of wavelengths at 6 meters where a wavelength is about 19 feet. I think that you need to keep this in mind as it is the height above ground in wavelengths at the frequency of interest - not just the "low" physical height that makes a difference.

Also I have not seen any comments on the type of terrain that surrounds the antenna installations being described. It is very important to take into account the terrain from the base of the tower out to a mile or so as this will greatly effect the performance of the antenna system. You can not assume that an antenna over flat ground at 30 feet will perform the same as an antenna at 30 feet on a hill. You can use programs like TA or YT (TAD) to model antennas over terrain.

The W5KFT station is setup the following way: Cushcraft 617 boomer at 38' that rotates stacked over another 617 boomer at 18' that is fixed towards EM79. This tower is about 40 feet from the edge of a large lake and has about 5 miles lake water in front of it to the northeast. So in this direction - and in many there from this location this antenna is over "flat" ground.

The other antenna is a 5 ele Cushcraft (12' boom) at 140 feet - this tower is about 100 feet from the edge of the lake.

The land in the other directions is mostly flat. With a slight rise here and there. The stack is the main antenna and it works very well. According to the antenna programs it has the following peaks and relative gain.

	<u>1st lobe</u>	<u>1st null</u>	<u>2nd lobe</u>	<u>4 dB points 1st lobe</u>
38' Antenna	6	12	20	3 - 9 deg
38'/18'	7	17	22(-14 dB)	3 - 12 deg
18'	13	27	>30	3 - 20 deg

What I find is that on single hop e-skip that any one of these antennas can and does work very well. On double hop e-skip either the stack or the bottom antenna is the best antenna. Often to the stations (WI and VE1) that are just beyond my 1 hop distance the bottom antenna is the best. My guess is that the "short" two hop e-skip takes a higher angle to make the two short hops.

The stack is the best all around performer and has a bigger arrival angle "footprint" than the top antenna and has more gain than the low antenna. It also has the added advantage of having gone major lobe (the one centered at 7 deg.) and as a result maybe less prone to multipath coming in at different arrival angles.

The antenna at 140' is a small antenna and as a result of that and poor design has less gain and less pattern in general - even so I find that this antenna is a very good antenna at times and can even be better than the stack - usually on some arrival angle that one of the antennas in the stack does not cover well or at a low angle. It should be pointed out that a 6m antenna up this high has many peaks and nulls - as it gets closer and closer to a free space pattern.

I see a lot of difference in how selective the arrival angles are on 6m e skip and I think that you need to have an antenna system that can cover as wide a range as possible to take advantage of this fact. As others have noted it is possible to switch between antennas and have S-9 signals disappear or even go away. This is one effect that seems to me to be much more pronounced than on the bands below 50 MHz.

I think that it is well worth your while to have at least two antennas at different heights on 6m.

Also 6m e skip openings can/are very short in nature so it is also a good idea to have antennas that you can point in different directions at the same time so that you can beam your signal in more than one direction during an opening.

So what does all this mean? If I were going to put up one 6m yagi for e skip - I think I would put it up somewhere between 20'-40' feet if I could. If we are talking about an all around antenna for 6m - e skip and tropo etc. - then you might want to go a bit higher.

I would try to put up several antennas - even if they are just 3 or 4 element yagis or even a vertical. I have decided that the W5KFT station will have the following 6m antenna setup:

1 - 38'18" Cushcraft stack to the NE with top rotary.

2 - 155' M2 30+ boom yagi - rotary.

3 - 30'15" hygain 66dx stack fixed to southern W6 - in phase all the time.(so I can call CQ in that direction more that I have been)

4 - A vertical.

The switching will be set up so that I can feed any of the three antenna systems at one time and/or any combination of them as well. (not including the vertical)

Anyway - I hope that I have added something to this discussion and I also hope that the exchange of information will help others build bigger and better stations.

### 1998 ELECTIONS FOR CLUB OFFICERS

**President:** Ron Whitsel, W3RJW

**Vice President:** Jim Antonacci, WA3EHD

**Treasurer:** Dave Mascaro, W3KM

**Recording Secretary:** Walt Zambach, WA3AQA

**Corresponding Secretary:** Richard Conly N3AOG

**Board of Directors :** Ed Finn, WA3DRC and Walt Rauscher, N3EVV

### -SWAP SHOP:

(send all ads to the editor)

**FOR SALE:** Putting my single 3CX800 70 cm power amplifier up for sale. It is based on the Henry amplifier and puts out 700 W. Includes manual, blower and 240 VAC power supply. Have been using it regularly on EME. Works great. \$800 USD including shipping in the USA. I am selling because I want to upgrade to an LA70. 73 dc Joe KU3T, Joe Keer, 468 Cheswyck Drive, Harleysville, PA 19438, (215) 256-1464 (home), (610) 354-5320 (work).

**FOR SALE:** Phelps-Dodge 2 meter Super Station Master commercial omnidirectional antenna, 22' long, excellent condition with all stainless-steel hardware, best offer or trade offer, Dennis, N3DG 215-938-8820.

**FOR SALE:** ADI AR-146 50 watt 2 meter FM transceiver, BRAND NEW with up/down mike, mount and manual (list price \$300), only \$150. Dave, N3KQI, 215-535-7180.

### TID BITS

The July/August issue of QEX includes the 3rd installment by Doug, KF6DX/7, on a DSP Tutorial. Zach, W1VT's RF column describes design techniques for band pass filters.

We are pleased to announce that the new chairpeople for Hamarama are NK8Q and N3XEM with assistance from K3MFI. I am sure that we will all give them full Pack Rat support and help where needed.

Martin G3USF, Beacon Coordinator, Region 1, reports on the VHF Reflector that the 50 MHz Beacon List can be found at: <http://www.keclc.ac.uk/depts/par/50.htm>.

New e-mail address for Al Sheppard, N211F: [alitt@juno.com](mailto:alitt@juno.com)

**Correction:** The June Cheesebits list of awards at the Club Banquet should have included Dennis, N3DG, as one of the crew at the K3EOD multi-op station that was in 2nd place in the club.

The N4UK/B 2m Beacon EM84xp is at 144.297.5 MHz Send signal reports to Ken, N4UK at [n4uk@mindspring.com](mailto:n4uk@mindspring.com).

### CHEESEBITS SUBSCRIPTIONS

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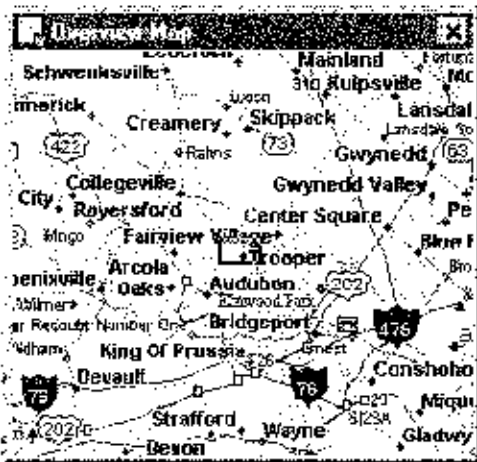
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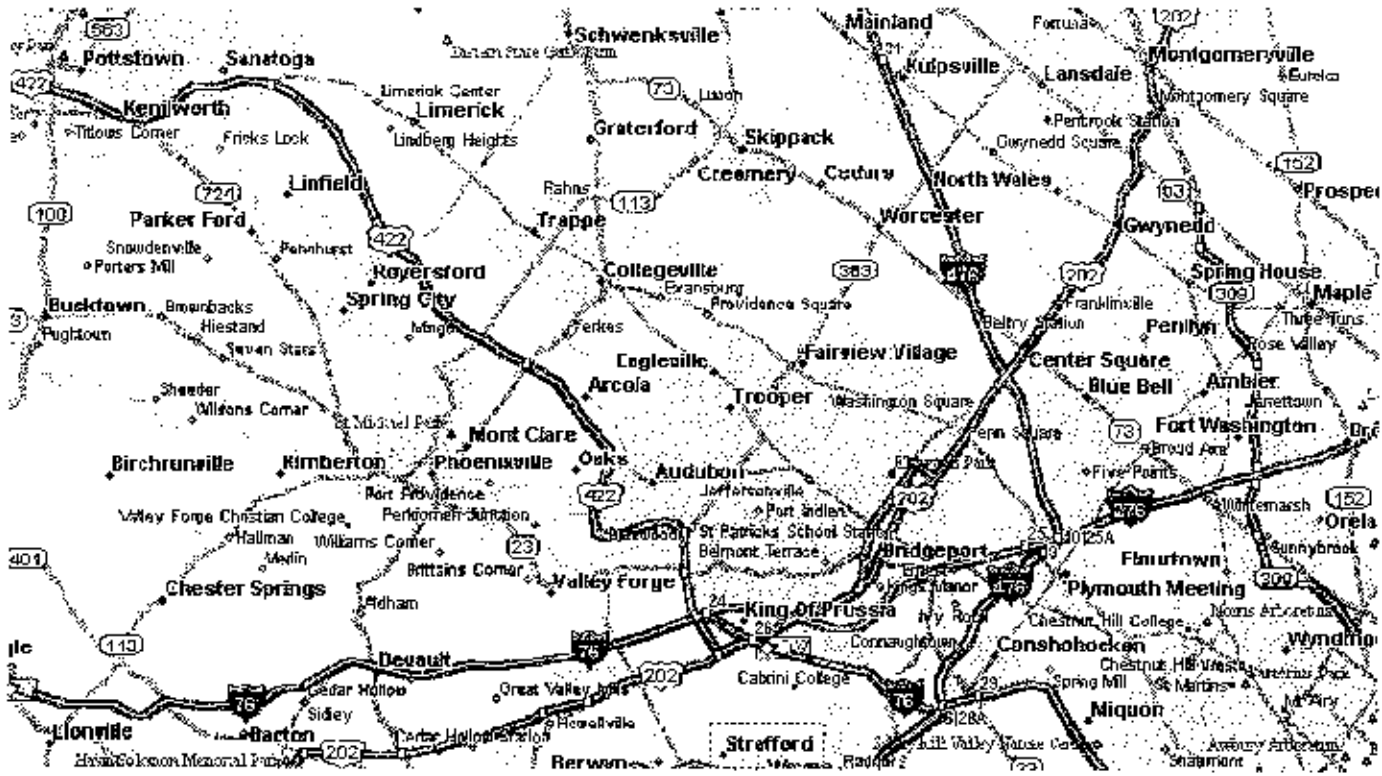
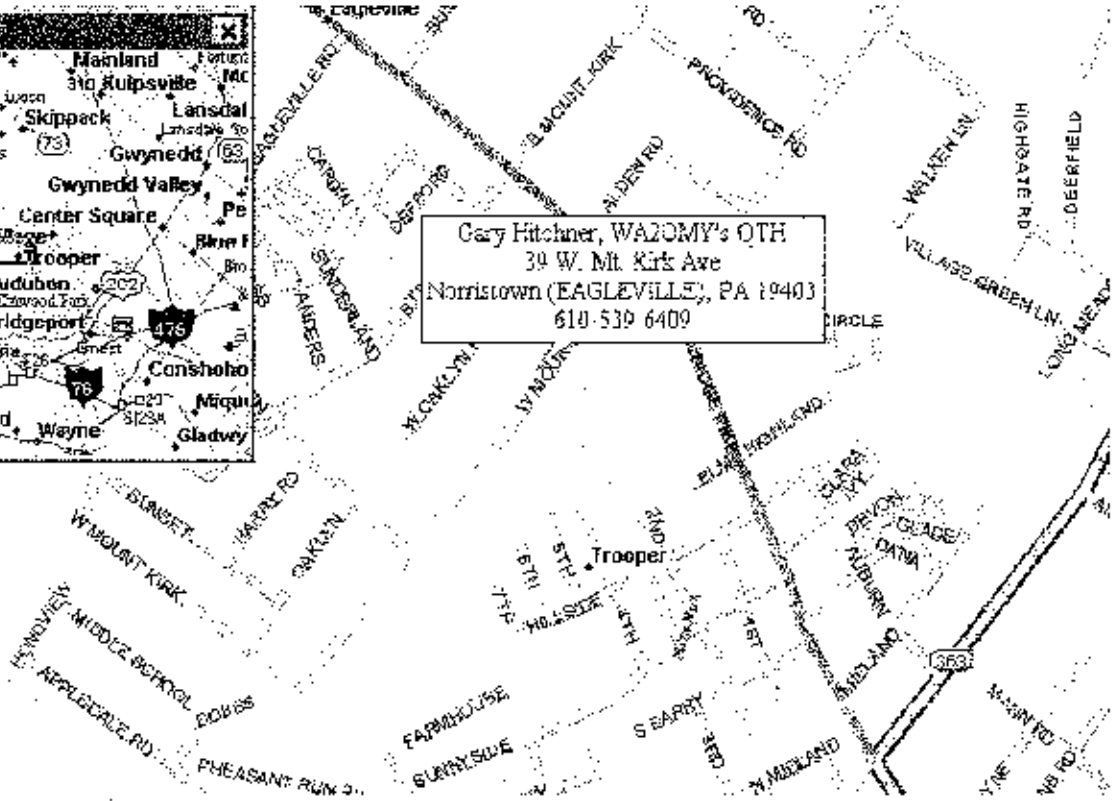
**1998 ARRL June VHF QSO Party Totals\***

Call	Grid	Class	Total Points	Band QSOs/Grids											
				50	144	222	432	903	1.2G	2.3G	3.4G	5.7G	10G	24G	LAS
W2SZ/I	FN32	U	1,187,424	680/121	630/49	174/31	300/39	85/21	105/23	59/17	32/10	39/19	27/8	1/1	3/3
K3MQ11	FM19	U	997,875	768/177	774/68	169/50	289/50	26/14	27/12	-	-	-	9/2	2/2	
W3CCX	FN21	U	984,750	850/167	426/55	134/34	232/43	41/16	61/22	26/11	18/8	15/8	16/9	3/2	
K8GP	FM08	U	975,540	762/199	477/64	124/42	219/53	31/20	52/28	15/9	8/5	3/3	2/2	1/1	
K5TJA	EL29	U	493,171	996/203	165/57	30/15	74/31	8/6	14/9	8/4	8/4				
W4FY	FM08	U	466,918	631/166	320/47	78/30	109/39	16/10	30/17	3/2	-	-	1/1	1/1	1/1
K2TVI	FN21	U	337,440	532/120	323/29	102/25	118/26	16/7	27/10	7/4	1/1	2/2	4/4		
K1W11S	FN43	U	327,565	585/131	258/34	56/22	97/24	19/12	29/14	10/7	1/1				
NI6G	DM06	U	94,650	202/85	119/22	57/15	72/18	-	16/9	-	-	-	1/1		
NN5DX/O	DM79	U	59,153	299/127	42/11	10/5	15/4	2/2							
K8NNU	EN82	U	47,376	147/74.0	74/22	24/11	40/14	-	9/5						
W5KFI	EM00	L	630,480	1363/245	207/66	31/15	72/29								
W7XU	FN13	L	474,390	944/259	129/58	37/29	54/32								
W0ZQ	EN34	L	391,040	792/227	200/46	43/20	72/27								
W1XF/O	DN80	L	369,279	1066/239	85/27	21/12	38/13								
K1TR	FN44	L	243,840	570/115	348/34	73/20	103/23								
KV4I	EM85	L	120,156	410/155	115/32	12/6	20/11								
N5HHS	EM10	S	406,896	1214/233	102/41	-	34/20								
K1TFO	FN31	S	385,560	315/110	364/47	83/30	125/36	41/19	50/17	13/9	2/2				
W5UWB	EL17	S	373,520	1095/221	82/39	9/11	29/15	-	5/4						
K9MK/S	EM12	S	315,744	806/192	132/38	35/18	68/28								
K1RZ	FM19	S	289,044	399/127	250/36	60/22	89/27	23/14	37/19	10/7					
K0GU	DN70	S	288,008	1032/234	36/17	-	22/8								
KE8FD	EM89	S	258,718	261/107	176/55	65/35	92/41	24/18	37/21						
WD5K	EM12	S	203,942	953/214											
N0LL	EM09	S	201,318	638/213	49/25	10/10	19/16	-	3/3						
KD1DU	FN31	S	186,032	186/51	336/42	69/26	88/25	17/7	30/13	10/6	-	-	10/6		
K3AM	DM54	S	167,580	683/203	22/15	7/4	8/6								
WA5RT	FL49	S	148,071	511/169	70/39	-	30/23								
N5JHV	DM62	S	139,314	642/209	9/5										
AB4CR		R	256,824	?	?	?	?	?	?	?	?	?	?	?	?
W2FU		R	174,730	127/47	158/27	91/20	85/21	41/16	34/15	21/10	9/5	4/3	3/3		
W3EKT		R	146,885	253/65	245/26	68/14	104/18	26/10	31/8						
ND3F		R	146,376	?	?	?	?	?	?	?	?	?	?	?	?
N1MJD		R	99,440	291/34	180/23	81/15	93/15	12/5	17/7						
KF9US		R	68,808	97/40	81/23	42/14	63/17	26/9	30/9	-	-	-	2/2		
K7XC		R	65,727	123/33	14/29	25/7	108/22								

\* Thanks to Tim, K7XC and Ron, WZ1V for acquiring and sorting the files



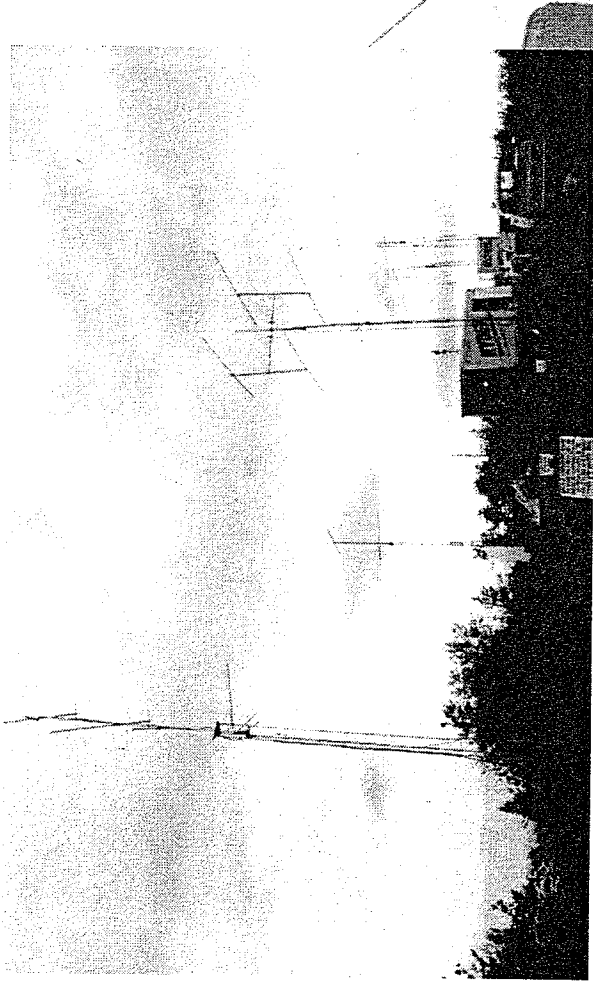
Gary Hitchner, WA2OMY's QTH  
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 Norristown (EAGLEVILLE), PA 19403  
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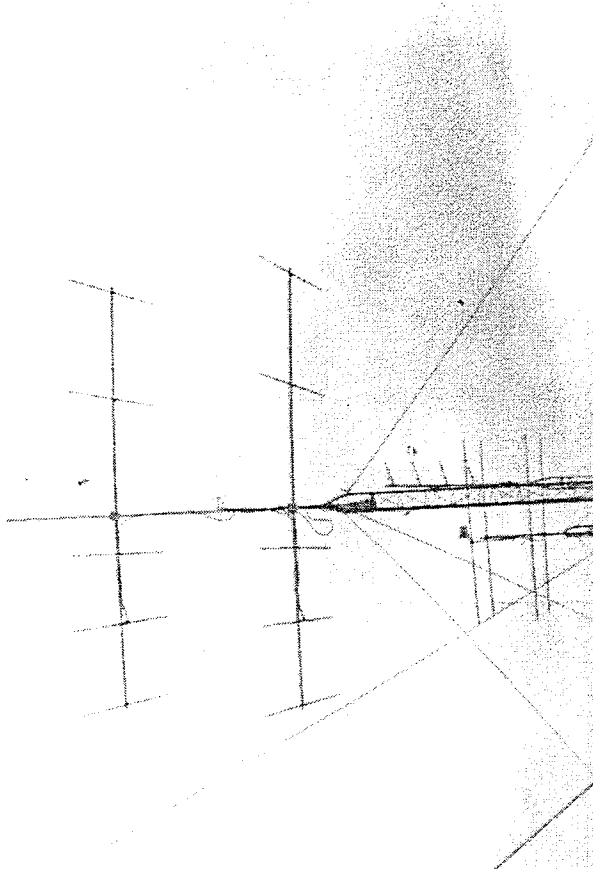
Map to Gary, WA2OMY's QTH for the June 1998 Meeting



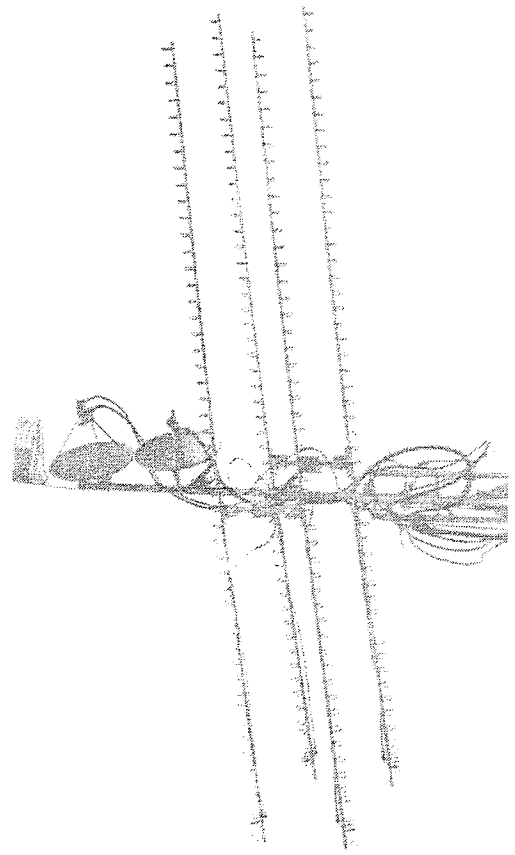
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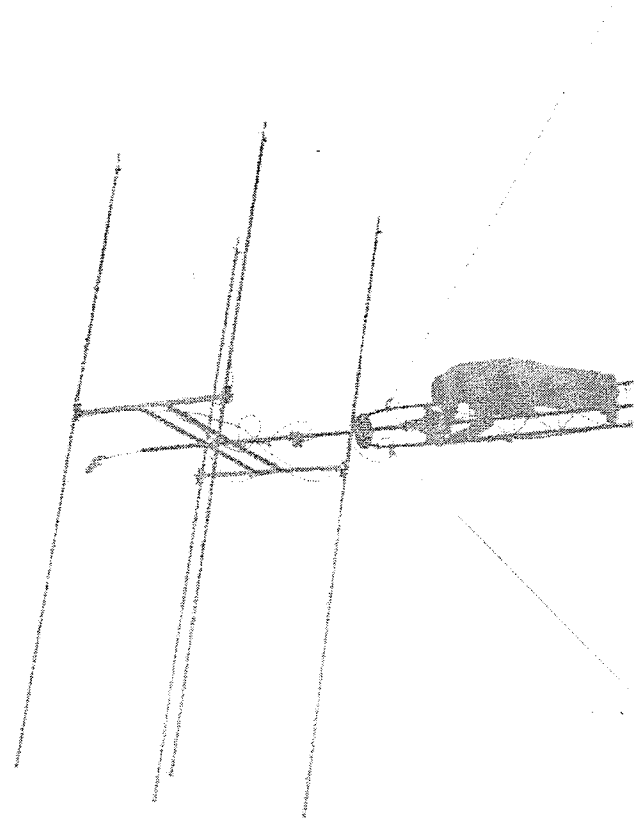
View of the antennas from the parking lot



6 Meter Beams

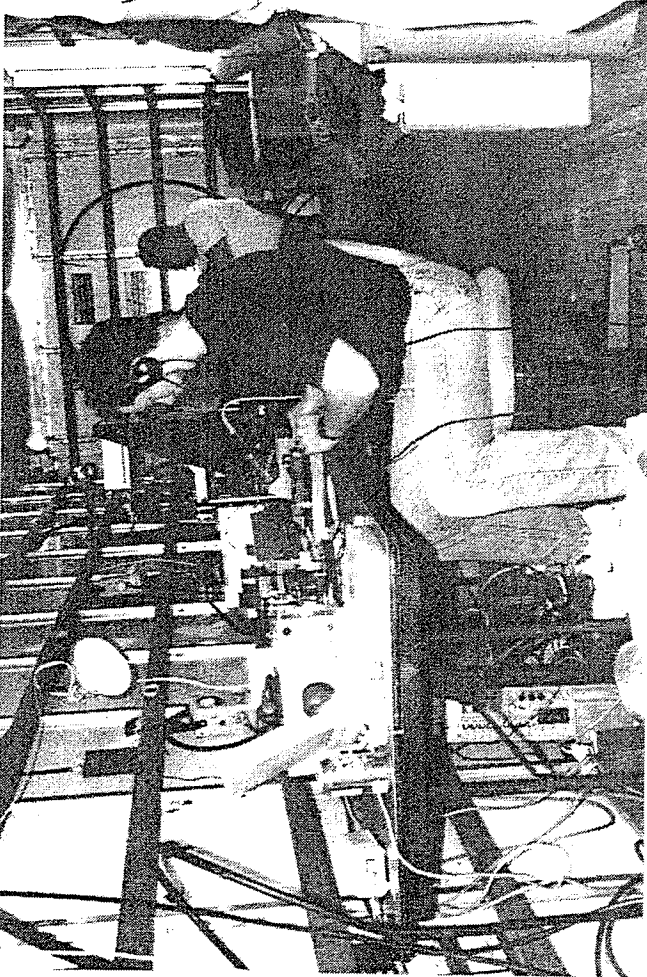


2.3/5.6 GHz Dish/10 GHz Dish/1296 Loopers

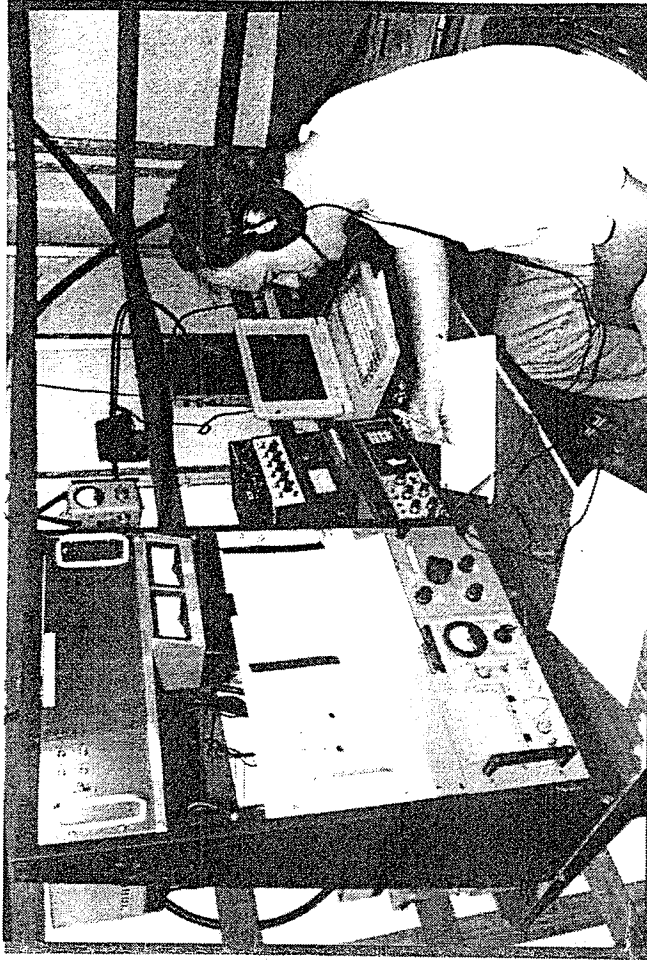


Final adjustments on the 144 MHz antennas

1998 JUNE VHF CONTEST



Paul, WB3JYO at the 144 MHz Station



Len, N3NGE at the 222 MHz Station



Rick, K1DS & Ron, W3RJW at the 432 Station



Bob, W2SJ and Phil, WF3W on 50 MHz

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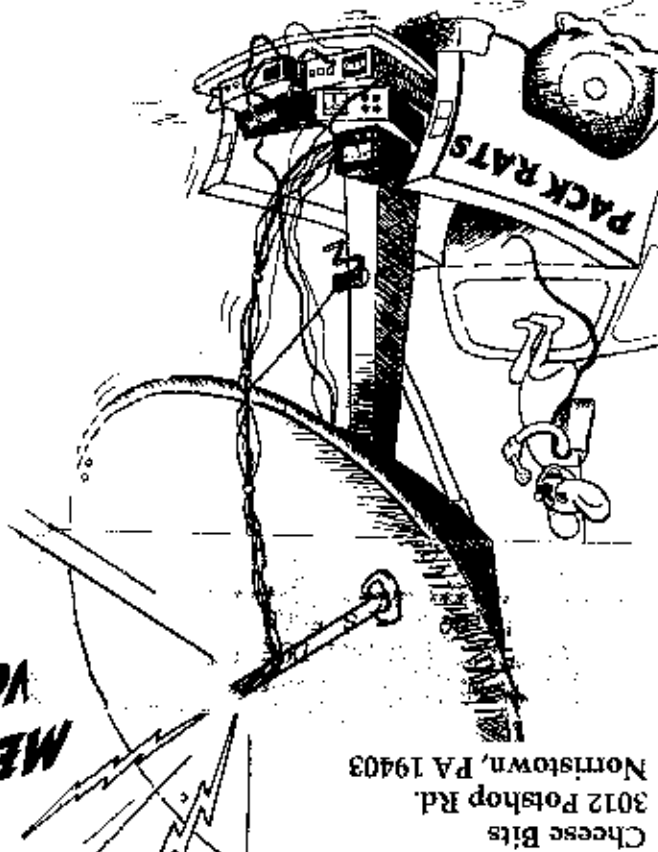
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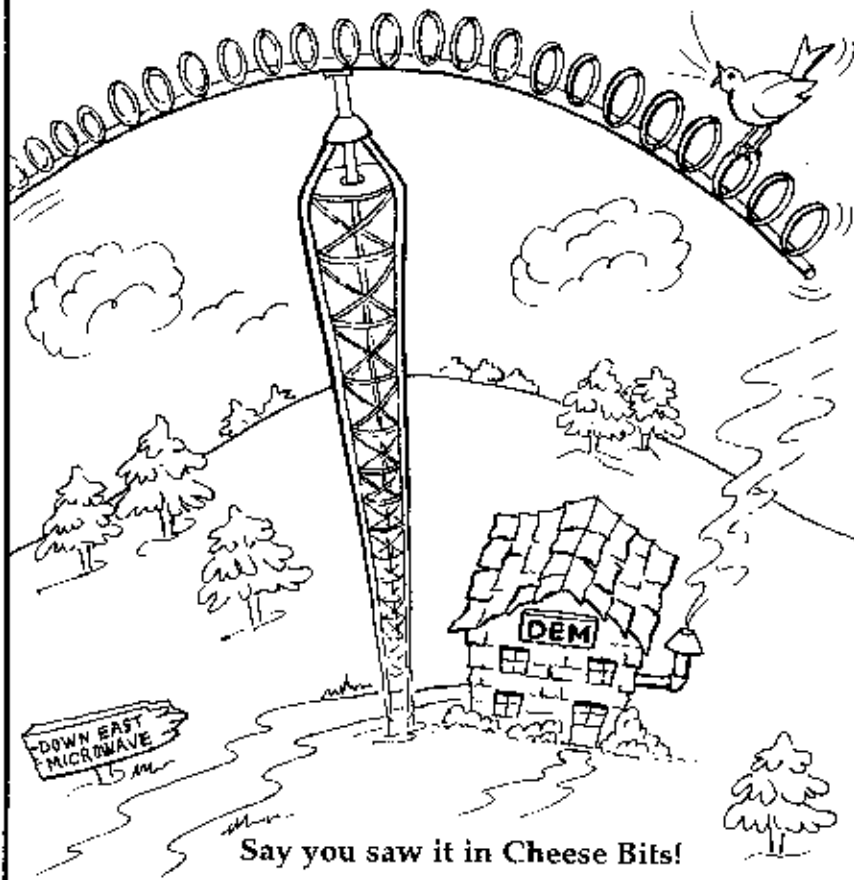
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