

CHEESE BITS



VOLUME XLI

W3CCX

CLUB MEMORIAL CALL

SCANNED TO PDF BY BERT, K3IUV, 2013



ARRL
Affiliated

March 1999

Number 3

The PREZ SEZ

The January contest wrap-up meeting was held at the QTH of Bob Fischer, W2SJ, in Pennsauken, NJ. The attendance was outstanding with over 30 members showing up to make light work of scanning the logs for obvious errors or omissions. With the help of W3KM, entering the scores into the computer, the club aggregate score was quickly computed. It looks like we just squeaked by the requirement of 51 logs for the unlimited class club competition. It appeared we would do 55 logs or so before the contest, but several members that we were counting on let us down and made it a tight squeeze. I want to thank everyone who took the time put in an effort to support the club and to turn in a log. Thanks to AA2UK for his efforts as chairman and to all those who helped make this a great club effort. The January Contest has been a Pack Rat tradition for over 35 years. With the help of the membership it can go on for another 35 years or more.

The annual club banquet (Ladies Night) is coming up on May 8, 1999. It will be held once again at the Mill Race Inn in Holland, PA. This is a great social event (Yes, you are allowed to be sociable one night a year; it doesn't hurt a bit) that everyone should try to attend. The folks at the Mill Race really treat us great and the food is excellent. Awards will be given for the January Contest, Home Brew Night and the Pack Rat of the Year. Mark the date on your calendar and make the Pack Rat Ladies Night the "prior commitment".

N3AOG is in the process of arranging for the purchase of official Pack Rat club jackets. These will be really high quality, lined jackets with your name, call and the Packet Rat logo embroidered on the front of the jacket. We will have samples at the March Meeting. Dick has samples of different size jackets so that you can be sure and get the right size. The jackets tend to run a size or so small so a fitting is a good idea. The more jackets we buy the cheaper the price so come to the meeting with check book in hand. Price range will be between \$45 and \$55 depending on quantity we order and the jacket size you need.

The March meeting is Home Brew Night so bring your projects to the meeting so we all can see what you have been up to this long winter. It doesn't have to be expertly built; it doesn't even have to work. The idea is to give other people ideas and to show that just about anybody can build something if they put their mind to it. Home Brew night brings back fond memories of "Doc" Cutler, K3GAS. Doc was a Dentist by trade. His passion, however, was building things for his ham shack. He had every Heath Kit known to man and was never afraid to try something new. Doc's construction skills sometimes left a little to be desired, but he never stopped trying. That's what it's all about. Who knows, if you are not careful, you might even learn something along the way.

73, Ron, W3RJW

MEETINGS

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

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 FN20LE

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PACK RAT BEACONS - W3CCX/B

FM29JW Philadelphia, PA
50.080 144.284 222.065 432.295 903.072 MHz
1296.251 2304.037 3456.220 5760.190 10,368.177 MHz

MONDAY NIGHT NETS

<u>TIME</u>	<u>FREQUENCY</u>	<u>NET CONTROL</u>
7:30 PM	50.150 MHz	WA3EHD
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/WA3DRC
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



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JUNE CONTEST, FIRST CALL !!

de Al N3ITT

Greetings fellow Pack Rats! hope everyone has recovered from the Jan. Contest by now. Hard to believe it's time already to plan the clubs next big operating event, the June VHF QSO Party. Yes it's Spring already! The days are getting longer, temps are rising, the Phils are at spring training, and all true Pack Rats are planning on helping with the clubs effort in June by joining the group on the mountain, roving, or fixing what went wrong in Jan. so they can work the gang on the mountain on all bands.

Last year the club put forth a super effort, we were truly contenders and finally ran with the "Big Dogs". This year we move towards the head of the pack!!

Before continuing I'd like to take the time to thank Paul Drexler, W2PED, for the above and beyond effort he has put in as 2 meter

band captain every June for some ten years. Having worked with Paul on 2, I can attest to the fact that this is not an easy job, SSB is wall to wall QRM, and 2m FM can be an annoying and frustrating operating experience at best. On behalf of the entire club, I'd like to say Paul, Tnx!! Well Done!! For those who do not yet know Paul Announced at the Feb. meeting that he is going to take a break this year and let someone else have "all the fun" (HI)

Phil Miguez has volunteered to do 2 meters. I hope Phil has big feet (and can drive a truck, hint hint) Phil has been microwave band captain for many years, doing an excellent job there, these are some big shoes to fill also, and I need someone to take his place. ANY VOLUNTEERS??? Please let me know ASAP!!!!

If you plan to come to Camelback let me know by phone, on the 2m net or e-mail asap so I can start to make plans and assign jobs. June contest will be June 12 and 13 this year. We will be leaving June 11 and returning the 14th. Hope U can make it!!!

CU on the bands, Al N3ITT.....

CALENDAR OF COMING EVENTS - MARCH 1999

- 6-7 **ARRL International DX Contest** (phone). See page 87 of the Dec. Issue of QST for rules.
- 11 Packrat **Board of Directors** Meeting at the QTH of Ed Finn, WA3DRC, in Richboro, PA. All interested parties welcome. Starts at 8:00 P.M. Call 215-322-2105 for directions.
- 17 **St. Patrick's Day**
- 18 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 enthusiast are welcome. Prizes will be awarded in several categories.
- 20 Death of Brendan, Dublin 1964.
- 21 DELAWARE VALLEY RADIO ASSN Hamfest will be held at the Tall Cedars of Lebanon Picnic Grove in Hamilton Township NJ. TI on 146.071.67. See <http://www.slac.com/w2zq> for more information.
- 25 **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.
- 27-28 Timonium Md. **ARRL Maryland State Convention and Greater Baltimore Hamhoree** and Computerfest at the Maryland State Fairgrounds. VE exams given. Call 1-800-HAM-FEST. TI on 146.67- and 224.24-.
- May 8 Annual Banquet (Ladies Night) of the Mt. Airy VHF Radio Club at the Mill Race Inn, Holland, Bucks County, PA.

SWAP SHOP:

(send all ads to the editor)

FOR SALE: CALLSIGN HISTORY. Name and address of each holder since 1912. Cost \$15 plus SASE for printed CERTIFICATE. Wanted CallBooks before 1970 and QST's before 1940 will buy or trade. Also looking for 1x2 Ham Radio License Plates for my collection. Ron Allen W3OR, PO Box 73, Bethel, Dc. 19931-0073 or call 302-875-1100.

FOR SALE: Icom IC-271H 100 watt 2 meter all mode with built-in PS-35 supply. Excellent condition \$700.00, Yaesu FRG-100B Receiver 0-30 MHz. Mint condition \$450.00, Contact: Harry Schools, K3HS, 215-483-1111.

HEALTH AND WELFARE: Hal Grace, W3HFY, had a severe stroke and now has been moved to a nursing home. He is paralyzed on the left side and can not speak. It appears that his stroke happened just after the January contest. Hal is a long time member of the club and could be heard almost every evening on most of the nets.

Hal's address is Haverford Nursing Home & Rehab. Center, 2050 Westchester Pike, Havertown, PA 19083. I am sure that it would help Hal's spirits if everyone could drop him a get well card. Al, K3EOD.

Mt. Airy VHF Radio Club, Inc.

'The Pack Rats'

January 1999 VHF Sweepstakes Contest

Total Logs: 52

Total Club Score: 2,795,154

Single Ops

Contacts and Grids per band

Total

Call	50 MHz	144 MHz	222 MHz	432 MHz	903 MHz	1.3 GHz	2.3 GHz	3.4 GHz	5.7 GHz+	Contacts	Grids	Score
W3RJW	170/25	248/32	107/21	120/23	40/11	60/14	28/6	16/5	20/6	809	143	255,112
WA3NUF	160/25	248/25	92/18	126/20	32/7	51/12	23/4	10/2	12/3	754	116	178,176
N3NGE	167/23	178/28	61/18	120/22	44/13	49/13	23/6			642	123	155,349
N3EXA	160/20	205/22	112/21	110/16	38/6	48/7	18/3			691	95	123,215
W3OR	108/32	99/31	63/23	82/29	22/11	31/15	2/1	2/1		409	143	105,963
W2PED	129/15	136/19	84/15	81/16	30/6	43/8	26/6	11/3		540	88	104,104
W2SJ	115/17	144/13	81/12	102/14	40/8	49/9	24/3	12/3	4/1	571	80	104,080
AA3GN	84/15	176/24	63/14	86/14	25/4	39/7	17/3	6/1	5/2	501	84	87,192
K3GNC	95/14	188/24	76/15	100/20	25/7	32/7				516	87	75,081
NK8Q	184/25	169/23	71/16	85/10		33/4				542	78	62,166
W3KM	68/13	187/20	65/13	69/14	28/5	32/4	11/3			460	72	61,272
WA3DRC	67/7	163/22	28/2	94/16	32/5	49/9	14/3			447	64	58,240
W2SK	44/10	118/16	47/9	45/9	14/3	14/3	13/2	9/2	5/2	309	56	37,744
WA3EHD	85/11	194/19	67/9	60/7		31/3	10/2			447	51	37,587
N3DQZ	122/16	101/14	61/9	76/10	23/4	20/3				403	56	37,464
K3MFI	94/7	157/14	73/11	73/8	16/3	21/3	5/2			439	48	35,088
N3AOG	60/7	98/10	53/5	53/6	26/3	28/4	14/2	8/2	9/3	349	42	35,028
KB3XG	38/4	40/7	35/7	51/8	21/2	21/2	14/2	9/2	9/5	238	39	26,286
WA3AQA	72/8	95/13	65/12	52/7	18/3	24/3				326	46	26,174
N3XEM	54/5	128/14	55/6	64/4	24/2	29/2	11/2			365	35	25,200
WB3KRW	31/9	98/13	31/9	52/8	15/4	24/7				251	50	22,550
KU3T	24/5	97/12	99/14	26/4	10/2	5/2				261	39	21,177
W3KKN	97/10	102/13	40/4	55/6	20/2	22/2				336	37	20,609
K3IUV	68/9	106/12	65/7	63/11		15/2				317	41	20,090
K1DS/R	57/6	95/6	47/4	51/4	12/3	21/3	7/2		3/5	293	33	18,480
KB3IB	45/10	51/9	39/8	39/10	16/4	23/3				213	44	17,952
W3DFM	17/4	100/15	30/8	36/9	10/4	10/4				203	44	14,476
KU3A	51/8	87/16	40/8	33/7		11/2				222	41	13,448
K3DMA	83/9	95/6	57/5	52/4		17/2				304	26	12,064
N3EMY	74/6	133/13	23/2	80/8						310	29	11,977
W3GXB	39/6	115/14	7/1	43/9	21/3					225	33	11,154
WA3RLT	67/8	112/15		47/6		14/4				240	33	10,857
WB2VLA	47/8	52/10	26/3	27/5	12/2					164	28	7,084
W3IIF	38/4	86/12	56/8	1/1					1/1	182	26	6,396
NE3I	57/8	84/8		35/3		15/2				191	21	5,691
N3PLM	43/6	74/8		37/5	4/1	4/1				162	21	4,683
K3PHY		97/8	44/2		14/2					155	12	2,892
W3GAD	8/4	85/12		1/1						94	17	1,615
N2DEQ		107/10	6/2							113	12	1,428
WA3IAC		53/2	33/2	9/2	2/1					97	7	1,015
N3DG	3/2	30/3	2/2	11/2						46	9	531
N3EVV	9/2	24/2	25/2							58	6	498
W3HMU	48/10									48	10	480
K3VEQ		41/4								41	4	164
KA3MGB		19/6								19	6	114
K3HZO	2/2	2/1	2/1							6	4	32

Mt. Airy VHF Radio Club, Inc.

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Multi-Ops	Contacts and Grids per band									Total		
Call	50 MHz	144 MHz	222 MHz	432 MHz	903 MHz	1.3 GHz	2.3 GHz	3.4 GHz	5.7 GHz+	Contacts	Grids	Score
W2UR	340/52	408/44	120/26	135/31	53/16	63/17	36/6	17/5	15/5	1187	202	457,732
w/W2UR, AA2UK, WB2EYF												
W0RSJ	455/47	563/56	101/25	135/21	30/7	34/9	10/4	3/3		1331	172	318,200
w/W0RSJ, W1PV, N2IX, WB2ONA, N3DG, NET												
N3ITT	145/19	382/33	48/7	59/9	25/4	28/4				687	76	72,428
w/N3ITT, WU3C, N3OZO												
K2FK	99/16	129/16	62/9	72/11	31/5		14/2			407	59	43,188
w/K2FK, W3GAD												
WA2OMY	49/8	126/19	45/3	39/6	15/3	20/3	7/2	5/2	4/2	310	48	29,328
w/WA2OMY, WA3YUE												
K3EOD	148/20	60/13	30/9	29/8						267	50	16,300
w/K3EOD, WR3W, WR3P												

TID BITS

VUCC Award Checking: If you want QSL cards checked for your initial VUCC Award or an update, contact Harry, W3HIT at hbrown@voicenet.com or 610-584-4846. I'll do updates (up to 25 additions) at regular club meetings.

The March 1999 432 and Above Newsletter by K2UYH is at: <http://www.nitchawk.com/rasmit/em70cm.html>.

New e-mail address for Ernie, W3KKN: elkw3kkn@prodigy.net.

New web page for Directive Systems (K1WHS, Dave Olcan): <http://www.directive-systems.com/>

Feb. meeting visitor: N2RTX, John Litsch, 3642 Spruce Hill Rd. Ottsville, PA 18942

Congratulations to Paul Lieb, KH6HME, who, according to the latest ARRL Letter, has been selected to receive the Dayton Hamvention's Special Achievement Award for "his pioneering and record-setting work in tropospheric ducting and VHF, UHF and microwave communication"! An award that is well deserved! Jack, W7PW

POOF!

de Dave K1WHS

Hello VHFers, Magnetic sensor, buried out in the garden, has decided to roll over and die as of this am. As you can imagine, the ground may as well be concrete, and I will not be able to haul it out for at least another month. The ground usually thaws out enough in early April to dig out something buried 18 inches down.

As you have no doubt figured out, the Aurora Buzz Alerts from here will be scarce until then! I will try to rig up an above ground sensor, but things are not as stable there, with temperature fluctuations and assorted pushing and jarring all conspiring to screw up data. I had plans to make another sensor for measuring the N-S field in addition to the E-W field I have been measuring this winter. This sensor failure will motivate me to accelerate my efforts on the second unit.

I am guessing that the failure may be linked to frost action in the ground. Stuff really moves in Feb., with freezing and thawing, as any driver on back roads in NH and ME can attest. The frost heaves start to block out the sun at this time of year. I suspect that the power wiring may have been stretched and broken.

Now you have to turn your radios on more and listen to the North. That's not so bad! I am hoping to get a radio back up in my shack by early March, and get on the bands again. Later, Dave K1WHS

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 1999

Send to: SUBSCRIPTION/ADVERTISING MANAGER:

Bob Fischer, W2SJ, 7258 Walnut Avenue, Pennsauken, NJ 08110

ARLB014 AMATEUR RADIO SPECTRUM PROTECTION ACT OF 1999 INTRODUCED

ARRL Bulletin 14 ARLB014, From ARRL Headquarters, Newington CT March 4, 1999, To all radio amateurs:

It's round two in Congress for the Amateur Radio Spectrum Protection Act. At the request of the ARRL, Rep Michael Bilirakis introduced the 1999 version of the proposed legislation, HR 783, on February 23.

The bill is aimed at ensuring the availability of spectrum to Amateur Radio operators. It would protect existing Amateur Radio spectrum against reallocations to or sharing with other services unless the FCC provides "equivalent replacement spectrum" elsewhere. Bilirakis, a Florida Republican, also sponsored last year's measure, which attracted upwards of 83 cosponsors on both sides of the aisle. Rep Frank Pallone Jr, a New Jersey Democrat, is the initial cosponsor of the 1999 bill.

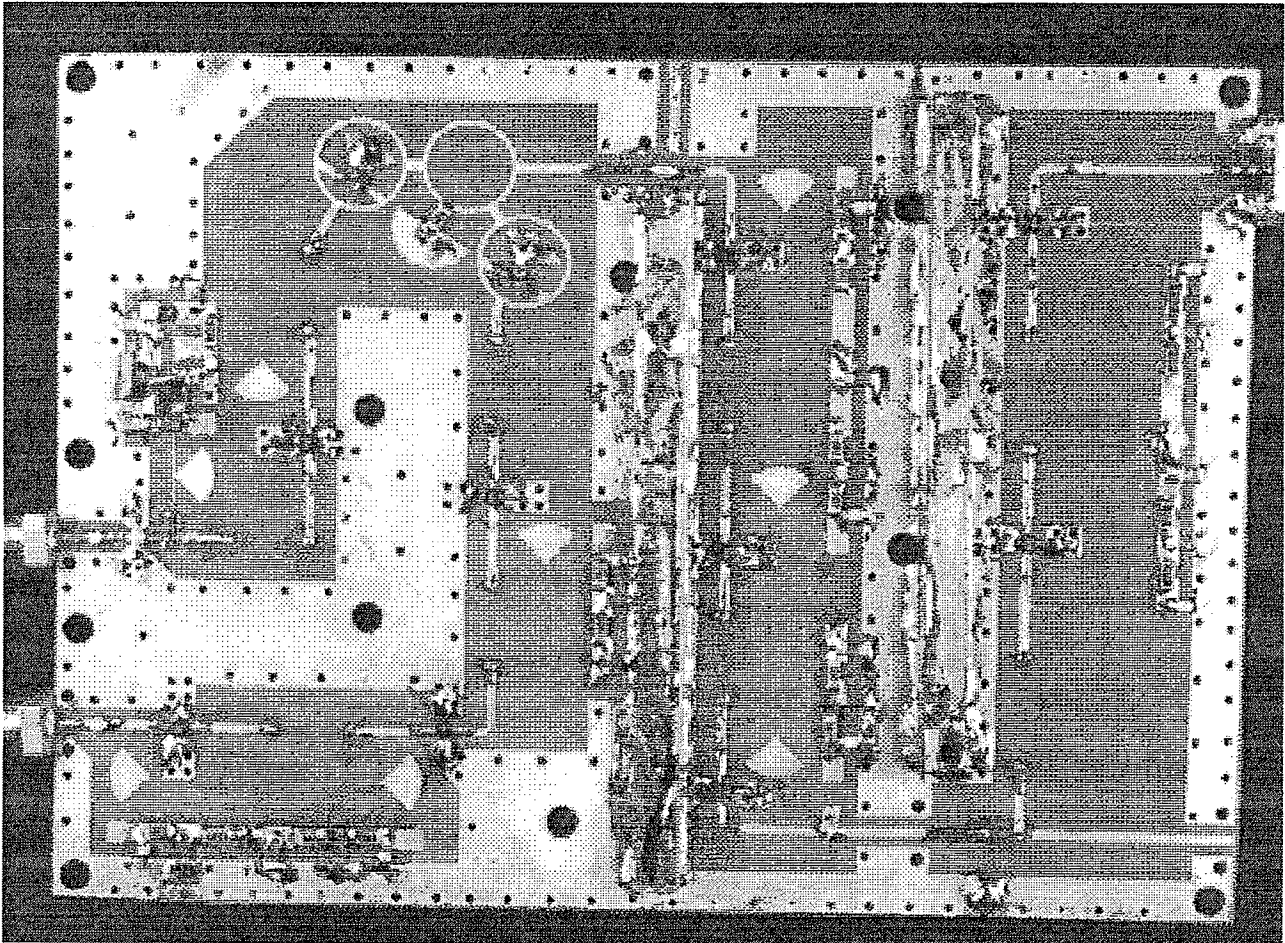
ARRL Legislative and Public Affairs Manager Steve Mansfield, N1MZA, says the 1999 bill "is largely the same as last year's HR 3572." The major difference is that the 1999 version adds "Amateur Satellite Service" frequencies to "Amateur Radio Service" in detailing the frequencies that would be afforded protection under the act.

HR 783 would amend the Communications Act to require the FCC to provide "equivalent replacement spectrum" to Amateur Radio and the Amateur Satellite Service in the event of a reallocation of primary amateur allocations, any reduction in secondary amateur allocations, or "additional allocations within such bands that would substantially reduce the utility thereof" to amateurs.

Mansfield said it's too soon to predict how HR 783 would fare in the new Congress, but said the fact that it has been introduced so early in the session "bodes well for our prospects". He said that a number of the cosponsors from last year have already indicated an interest in signing on again.

A copy of the measure is available via the Thomas Web site, <http://thomas.loc.gov/>

Read this carefully. Particularly the paragraph starting with "HR738 would amend". Now pretend this bill was to protect the deed to your house. Any warm fuzzy feelings? Sincerely, Ron Whitsel ,rwhitsel@totalrf.com



Prototype of the new 10 GHz DEM Transverter

- see <http://www.downtownmicrowave.com/10368trans.htm>

VHF WEAK SIGNAL GROUP DAYTON HAMVENTION ANNUAL BANQUET

The VHF Weak Signal Group that meets Monday nights at 0200 UTC on 3.843 MHz, would like to invite everyone that is coming to the Dayton Hamvention to our annual Banquet. We have reserved a room that will seat 125 on Friday night May 14, 1999 from 6:30 PM until 11:00 PM at the Holiday Inn North, Waggoner Ford Rd. Dayton, OH.

There will be a cash bar as well as plenty of seating to allow you to mix and mingle with other VHFers from all over the country and the world. There will be over 50 prizes with two grand prizes worth over \$300 each being drawn starting at 9:00 PM. Also, there will be a guest speaker who will provide a short talk on VHF activity. There will also be a noise figure-measuring table so bring your preamps to tweak.

The cost of a ticket to attend this function which includes the 2-entrée-banquet dinner, is only \$30 per person, and they are limited to 125. You may order your tickets by sending \$30 plus a SASE to either Tony Emanuele, WA8RJF, 7156 Kory Court, Concord Township, OH 44077 or Tom Whitted, WA8WZG, 4641 Port Clinton East Rd., Port Clinton, OH 43452. Website info is WWW.WA8WZG.COM or email WA8WZG@WA8WZG.COM This is one of the largest gatherings of VHF Weak Signal enthusiasts in the U.S., so get your tickets early and join us for an enjoyable evening at the Dayton Hamvention!

Thanks and 73, Tom WA8WZG

1999 SPRING VHF/UHF SPRINTS

dc Dave Bostedor, N8NQS

1. Object: To work as many amateur stations in as many 2 degrees by 1 degree grid squares as possible, using authorized amateur frequencies on the 50, 144, 222, 432, 902, 1296 and 2304 MHz bands.

2. Contest Period:

2.1. The 144 MHz Sprint will be from 7 PM until 11 PM local time on Monday (April 12, 1999).

2.2. The 222 MHz Sprint will be from 7 PM until 11 PM local time on Tuesday (April 20, 1999).

2.3. The 432 MHz Sprint will be from 7 PM until 11 PM local time on Wednesday (April 28, 1999).

2.4. The 902 MHz, 1296, and 2304 MHz Sprint will be on Saturday (May 8, 1999) from 6 AM until 1 PM local time.

2.5. The 50 MHz Sprint will be from 2300Z Saturday until 0300Z Sunday (May 15-16, 1999).

3. Exchange: Grid-square locator - signal report is optional.

4. Scoring:

4.1. QSO Points: Count one point for each complete QSO.

4.2. Multiplier: The total number of different grid squares worked. Each 2 degrees by 1 degree grid square counts as one multiplier.

4.3. Final score: Multiply QSO points by multipliers. Each Sprint is scored separately.

5. Reporting: Logs must be submitted no later than two weeks after the closing of the event.

6. Certificates for top three finishers in each Sprint (courtesy WA8WZG).

Mail or email complete logs to:

144 MHz SPRINT - nrclog@aol.com Rocky Mountain VHF+ Group P.O. Box 473411 Aurora, CO 80047

222 MHz SPRINT - frank@horizon.sri.com 50 MHz DX Bulletin, 12450 Skyline Blvd, Woodside, CA 94062

432 MHz SPRINT - wzlv@ntpix.net North East Weak Signal Group, 458 Allentown Rd. Bristol, CT 06010

902, 1296 and 2304 MHz SPRINT - skyser@edci.com Badger Contesters, 2342 Glendale Appleton, WI, 54914

50 MHz SPRINT - vhfuhf@voyager.net Great Lakes VHF/UHF Group, 434 Pattie Ave. Jackson, MI 49202.

DEMI has offered two \$100 credit participation awards. One is for 222 operation and the other is for 902 operation. Everybody that operates on those bands and sends in a log, (that's the important part!) will get put into the hat and some lucky callsign will be pulled out and notified of a \$100 dollar credit at DEMI! (re: WA8WZG)

THROUGH-THE-WALL ADAPTERS...

Editors Note. Occasionally when you're ready to unsubscribe from one of the reflectors, you find there are actually useful information exchanged. Here's an example. If you're not on the vhf reflector, here's a good examples. Now when it comes around to contest time, rovers etc. you might get a different impression.

The trigger for the series of exchanges:

At a recent hamfest I purchased a 12-inch long UHF female-to-female adapter. I thought these would be fine for getting out of my basement (through the block wall) to the outside world for my antennas. In checking my SWR, it was terrible. One adapter produced 4.4:1, and the other 7.8:1. I finally verified the problem to be these adapters. Are any of you familiar with these - and what should their impedance be? Thanks for your time - private replies are fine. Kim, ...Kim - WB8POC.

UHF connectors are not constant-impedance devices, although they work well enough at 2 meters and even possibly (although not recommended) at 70 cm. I have found a similar problem with UHF-type bulkhead feed-thrus, which are only a couple of inches long. Some of them show several dB loss. Bob, W6NBI.

THROUGH-THE-WALL ADAPTERS...contd.

UHF connectors and adapters are not specified at any impedance; the designator is "Non Constant Impedance". They are used with standard coax cables from 50 to 125 Ohms. At HF frequencies they are usually fine since any discontinuity is minor in terms of wavelength. At VHF and above they can be fine to horrible depending almost on the application and the connector/adapter. Most imports are pure junk, particularly barrel and right angle connectors. The barrels use a steel spring to make the 90 degree turn !! Depending on basement wall location, height above ground, keeping water out, etc., you may wish to drill a 1/2" hole for each coax and run them into the shack while sealing each hole. Another option, which I use, is to drill a 3 or 4" hole and install a length of PVC pipe. You can fit a lot of cables thru them, even with connectors on. The downside is sealing against weather and mice. I have two 4" pipes leading into the shack and 2 mouse traps. Drip loops keep out the water and I stuff insulation to keep out the cold but mice still get thru that BUT NOT past the traps!! 73 Carl, KMIH.

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Up here in Maine we use a dryer vent. It provides the sheltered exit to outside as well as a nice 4" opening to pass cables, hardline, etc etc. put a nice wooden finish plate on the inside wall with the hole cut to your liking for the cables and you are good to go. Stuff the vent with old wool socks or *whatever* to keep the draft out, and stuff then end with steel wool (as mentioned before). Works great. (Just keep it above the snow line!) If anything gets through.. well.. that is why I have cats. ;-) Jay NIRWY.

The PVC pipe is fine and solid. The method I use is a Dryer vent available at any hardware store. This provides a rain cover on the outside. At about 4 inch diameter, it will pass many cables. Closure is as others have described. Steve, K2IYQ, CM88sh.

You can get the same effect from the PVC, just mount a 45 or 90 degree elbow to it when you run through the wall. I use a 90 on the outside & a 45 on the inside for mine, squirted the hole in the wall with expandable foam to insulate & seal air out. Sealed the outside with silicon caulk to keep any water from getting in around the flange. The cables exit through a piece of EPP foam that's cut to fit the outer flange & then notched for the cables. When this is stuffed into the normal pipe diameter it gets compressed & forms an air & insect free seal from the outside world. What about mice, you say? Well, they've got a bit of a time trying to get to it since it's around 15' up from the ground! That vinyl siding sure can be hard for them to get a grip on. Wouldn't have to worry much about snow levels up there either (at least I wouldn't be interested in living anywhere that it might get that high!)... BTW, I trimmed my length of PVC so that the flanges from the elbows rest flush against the walls. It makes for a very neat installation & even a 3" pipe will give you enough room for a #6 grounding wire & at least 8 runs of RG-213 coax & a couple of rotor cables to boot (and my rotor cable is 1/2" across!). The installation tools are the most expensive part of the job, large dia. hole saws aren't cheap! 73, Don T., AI4CW, QRP-L#1670, Toney, AL, EM64pw.

This thread touches on a question I was going to pose to the reflector. I am hopefully getting ready to build a new home and will be including a room for radio purposes. I have been trying to decide how best to handle the cables and ground wires. I was thinking of mounting a aluminum or steel plate in the wall with bulkhead double female N connectors to connect the cables on the outside and inside. My thinking was that this would be a excellent way of isolating the shack from lightning, as well as bugs and moisture. It would also keep from having to deal with 7/8" and larger hardline in the shack. I would probably use flexible low loss coax as jumpers to the radios/amps, size depending on the freq. Is this a good design? Also, any other tips would be appreciated. I don't know how many chances I'll get and this and I'm trying to get it right the first time! TIA, Jeff, WB5YWI EM25, landman@azalea.net.

Jeff I use basically the same idea, but with 1/4" copper plate which is well grounded. Since I am at the top of a 1600 foot hill lightning is a problem. I simply disconnect everything from the inside and move all cables well away from the feedthru when ever weather threatens. I use Uhf female to female for 10M and below and N for VHF & UHF. So far so good. Semper Fi (former active duty Jar-head) 73 De KB2SGX

I think your choice of N connectors is sound. The bulkhead feedthrus are fine (unlike the UHF type). I used the same type of arrangement. I found an electrical box which was the same thickness as the wall, which made it much easier to set things up. Bob, W6NBI.

Carl's recommendation on using PVC pipe to pass coax through a wall is very good. I have used it for years. As he stated, there is a problem in keeping mice from entering the house through the PVC. Mice can chew through almost any substance, including metal. Mice can NOT chew through steel wool. It cuts their gums, and if ingested, they die soon after. Medium grade steel wool is inexpensive and available where ever furniture refinishing supplies are sold as well as K-Mart & Wal Mart. I tightly pack steel wool around the coax approximately 3' deep. I have used this method for several years and have not had any mice since I began using the steel wool. Woody, KJ4SO.

THROUGH-THE-WALL ADAPTERS...contd.

I use both the PVC method plus to my tower I use a 2" metal conduit thru my wall, thru 2 elbows and down a 8' conduit to a metal NEMA box with N connectors on it. I have 4 coax runs inside the conduit. The box end near the tower is grounded. The other thing I did where the 2" conduit and 2" PVC come thru the wall into the shack is I finished a nice piece of oak plywood 2 foot square and mounted it to the wall. It gives me a place to mount things such as switches, preamps, etc. Gary, N3JPU.

Jeff, go to Polyphazer's Home page, they sell as does Andrew, exactly what you need - especially Andrew. If you are serious about lightning protection then you ought to do it right. What you are proposing will not give you the sort of low (very low) inductance conduit for lightning you need / want. The commercial through-wall systems are really in the form of a open sided box. Think of it this way you have a box frame in the shape of a rectangle, then you have a top and bottom plate but no side plates. The box goes into the wall position such that the top plate faces outdoors and the bottom plate faces your equipment. Now, the top plate has a series of fittings (grounding kits) that provide entry grounding to the outer conductor of your feedline, the feedline continues on into the "box" and joins a lightning arrestor (there will be several arrestors on a common heavy duty copper buss the runs across the frame of the interior of the box, then you might even have two rows or layers of these arrestors), out of the arrestors you go through the "bottom panel" again tying the outer conductor to grounding kits, then on to your equipment. This box is tied to a ground system outside your outer wall, this system consists of multiple 8-10" wide copper buss that go to your in-ground system. The whole assembly is heavy duty copper for lowest possible inductance. Hope this helps. Owen Wormser, K6LEW / FM18, owormser@c3iusa.com

Hi Jeff: My den does double duty as the ham shack as well as my den. The outside wall is brick. I removed 4 of the bricks and mounted a weather proof steel enclosure with a hinged lid, that is approx. 12" W x 20" H x 5" D. There is an identical enclosure mounted approx. 4' above the ground on the side of my tower. There are 4 runs of 3" PVC buried under ground from the tower to the house that provide 2 runs of 7/8 Andrews LDF, 6 runs of 1/2" Andrews LDF, 4 runs of flexi 4XL (better grade of 9913), and 3 runs of 8 conductor rotor cable for the rotors and mast mounted preamps. I installed an 18" w x 12" w aluminum panel mounted between 2 studs on the inside wall of my den. The panel contains 16 "N" bulkhead connectors, 3 BNC bulkhead connectors, 1 UHF bulkhead connector, and 4 12-pin Cinch Jones connectors. This provides me with all the connections needed for HF through 10 GHz., including satellite antennas and the rotors and mast mounted preamps. This makes it very convenient to disconnect the cables when I am not operating and provides great protection from lightning damage to my equipment. The openings to the steel enclosure for the coax and PVC pipes are packed with steel wool to prevent mice from entering the house. I sealed the back of the steel enclosure to the brick wall using "Goop" which is a clear sealant. I use short lengths of flexi 4XL as jumpers from the heliax to the bulkhead connectors on the panel. The panel is grounded with 2 runs of #6 solid copper to an 8' ground rod at the base of the wall. The steel enclosure is also grounded with a #6 solid copper wire to the same ground rod. There are 2 runs of #6 solid copper run under ground to the tower ground. The tower ground consists of 3 8' ground rods installed approx. 4' from each of the 3 tower legs. These 3 ground rods are each connected to a tower leg and are also tied together with #6 copper. The #6 copper was oxy-acetylene welded to the ground rod. The tops of the ground rods and the ground wires are buried a few inches under ground. They have been underground for 5 years. I have uncovered the tops of the rods each year since they were installed to check and be sure that the welded connections are still good. There is no sign of any deterioration. The ground rod at the base of the outside wall is also tied to 3 additional 8' ground rods where the TV cable, telephone, and AC utility enters my home. A few friends have told me that my grounding system is "over kill". I do not agree. When it comes to lightning protection, there is no such thing as "over kill". 73, Woody, KJ4SO.

So how would you guys handle 6 runs of 1-5/8", 3 of 7/8", and some elliptical waveguide? 73, Arliss, W7XU.

Simple, more pipes that maximize the number cables per unit size. I have at least 16 hardline runs here, only the UHF and above goes straight thru into the shack. The others terminate in a "doghouse" attached to the house and convert to soft cable out of the weather. This year I will probably consolidate a bit with some 1 5/8" runs and Transco 4 port Spider Relays. Many of my hardline runs (mostly 3/4" and 7/8" CATV) are no longer used as I've downsized HF contesting. 73 Carl KM1H.

Several replies mentioned just bringing the Heliac straight through the walls via PVC pipe or whatever. Apparently no provisions for lightning protection. And that's how a couple of the locals around here do it -- just keep your home owner's insurance paid up. On the other hand, I grew up in a part of the country where we had maybe 1 thunderstorm per year, and I feel uncomfortable bringing feedlines directly into the house with all the lightning we have here in South Dakota. Am I being over cautious? 73, Arliss

Arliss: Check the Andrew Catalog 37 pgs. 566 and 567 for service panels with ArrestorPort Plus. I suspect they will be very expensive new, but the product is available. Also on the web at www.andrew.com Bob, K1RWK.

looked into different lightning protection schemes when I put up my first and only tower last summer. I came to the conclusion that if the tower is grounded well, you should be safe from most storms. I feed the coax directly through the wall and into the shack where I have arc-plug protected antenna switches grounded to cold water pipe with #6 copper wire. When severe weather is forecasted I disconnect the rigs and put the switches in the grounded center position. I have yet to do this, but the wireman had the best tower grounding scheme I've seen. Ground each leg of the tower to 8 ft minimum rods, then run a heavy gauge copper

THROUGH-THE-WALL ADAPTERS...contd.

wire in a ring around and connected to the 3 rods just below the surface. Have your coax feed into house higher than the leg grounds and most hits will follow the circle into the rods path rather than back up the coax. Direct lightning hits will blow up more than just ham gear, so you probably can never be fully protected. A note on insurance. Many homeowners policies will not cover electronic devices connected via 12vdc supplies. I heard this from several sources- I have yet to investigate my coverage, maybe a good time of year to do so. Otherwise there are specific insurance packages for ham gear available, hamsure comes to mind. Most of these still do not cover towers/antennas/feedlines though. 73, rick-kb0lgb-cn54.

I have never seen copper wool, but it sounds great. It sounds even better than the steel wool. Thanks Del, I forgot to mention that I spray the steel wool with WD 40. It has not rusted in the 5 years that I have used it. I also forgot to mention that all of the coax in the weather proof enclosure at the tower is grounded to a copper bus inside the enclosure. 73, Woody KJ4SO

Thanks to all those who replied. I think the majority of opinion is to go with a copper or brass plate with good grounding. Some also mentioned using an electrical box to keep weather out. The use of PVC pipe for running the cables to the tower was also mentioned. This leads me to a couple of more questions. 1) What do you do about water in the PVC pipe? I thought if I used pipe, I would use perforated pipe on a gravel bed to drain the water away. 2) If some kind of electrical box is used for weather protection I would think it would make for some tight turns in the cable, which is not ideal with hardline and/or uhf freqs. I really don't want to use any flexible jumpers outside to keep the potential losses down. Lastly, how do you guys handle the rotor cables? I figured I would use some kind of multi-pin connector. Any suggestions for ones that would be more weather proof than others? I had my ham III rotor modified by CATS and they put a round connector on the bottom and sent me the mate to put on my cable. I have occasional problems with all the pins making contact and have to make trips up the tower to wiggle the plug. (Usually when the band opens!) Thanks again to those who replied. I'm a little tardy with my email. Two sick children and a tired wife keeps me from these things! 73, Jeff WB5YWI.

1999 SVHFS CONFERENCE UPDATE

The third annual Southeastern VHF Society conference will be held April 9th and 10th, 1999. We will again have preamp noise figure testing, antenna gain measurements, the technical program, a flea market, vendor displays, a family program activity, presentation of the K4UHF award, the banquet and door prizes. The conference location is the Atlanta Marriott Northwest in Marietta, GA. The hotel and conference center is conveniently located northwest of Atlanta, Georgia at exit 110 of I-75, Windy Hill Road. The hotel rate will be \$69.00 per room for single or double occupancy if reserved before March 18, 1999 and mention the conference. For reservations, call Marriott at 1-800-228-9290.

The technical program as of February 4 includes the following presentations: (the program chairman has "interpreted" some titles while waiting for updates!)

WA4NJP, Ray Rector on Precise Calibration of Az. and El rotors for EME.

K5AND, Dick Hanson on Kenwood TS850's with internal DEM transverters.

W2CQH, Reed Fisher on Performance of 45W cell phone amps at 902 MHz, and also A 28 to 1296 evanescent-mode waveguide balanced mixer upconverter.

W8JI, Tom Rauch on IMD in linear amplifiers.

KB4IDC, Robin Midgett on the NT4L Rovermobile and multi-band roving.

WA8WZG, Tom Whitted (topic TBA)

N2CEI, Steve Kostro (topic TBA)

W6OAL, Dave Clingerman on Mobile VHF/UHF Horizontal Omnis'.

W4LNG, Ruddy Ellis on History of Noise Figure Measurements and how to do NF msmts with simple equipment.

K4SZ, Bob Lear on Icom 730/Ten-Tec 6m Transverter interfacing, some simple useful mods to the Telecc bricks, and adding transverter ports to HF rigs non-invasively.

The banquet speaker will be Joel Harrison W5ZN, ARRL VP and avid VHFer.

LAST CALL FOR PAPERS: The program chairman can make room for another presentation or so if there are any further interested presenters.

Contact K4SZ ASAP if you are to be one of the lucky few!! The deadline approaches quickly (February 26th with camera ready copy). There is still space in the proceedings for papers submitted for publication without presentation and your submissions are welcome. That category presently includes papers from Paul Wade W1GHZ and Pieter Ibelings N4IP.

Antenna gain measurements (2m thru 1296 and possibly further if time available, maximum of 2 per band per person) and preamp noise-figure testing (50 MHz-1296 first priority then to 10 GHz if time available) will be done at the conference location before the technical program begins so no one has to miss the presentations. Please register antennas and preamps on your conference registration form to ensure a testing time slot.

Please visit our web site <http://www.svhfs.org/svhfs/> or e-mail to k4sz@stc.net or write SVHFS, P.O. Box 1255 Cornelia, GA 30531 for further information about the conference and a registration form which includes sign-up for antennas and preamp measurement as well as the family program and banquet.

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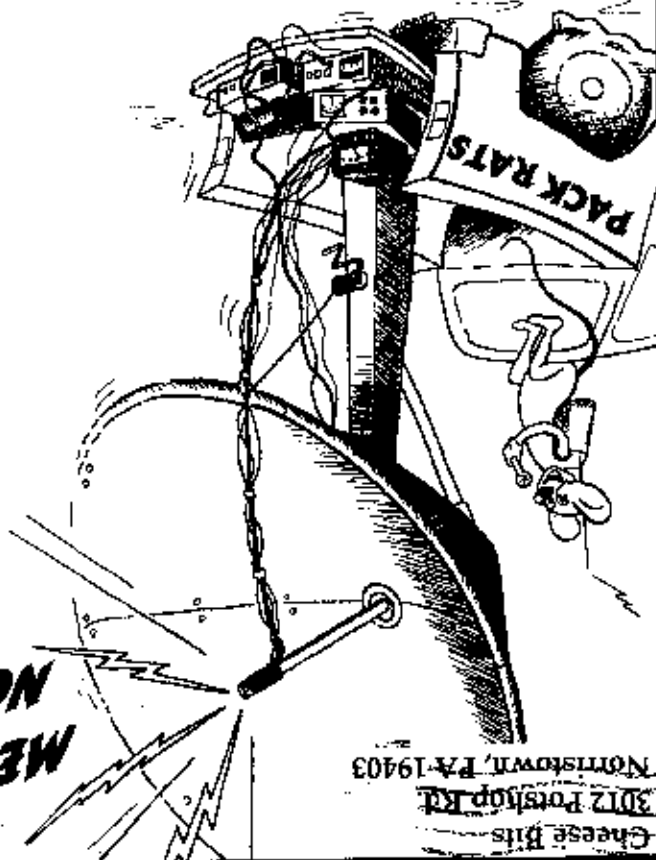
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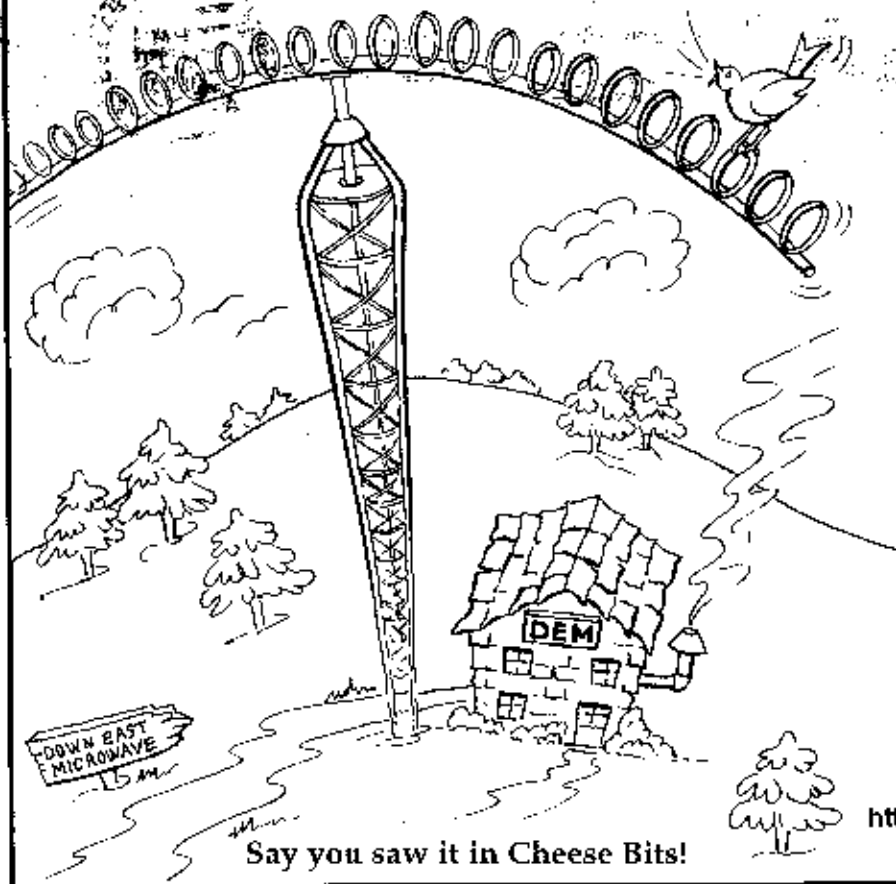
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