

PACK RATS'



PACK RATS

CLUB CALL: W3CCX

CHEESE BITS



MT. AIRY VHF RADIO CLUB, INC.

MT. AIRY VHF RADIO CLUB, INC., PHILADELPHIA, PENNSYLVANIA ARNS
50.125, 144.150, 220.125, 432.110, 1296.110 MHz-W3CCX-Repeater 222.98/224.58 MHz

Affiliated Club: AMERICAN RADIO RELAY LEAGUE

Meetings: Third Thursday of each month at 8:00 P.M.
Southampton, Pennsylvania 19866

VOLUME XXXI

MAY, 1989

NUMBER 5

THE PREZ SEZ

Spring is back and so are the Spring Sprints. These short four hour contests are great. A lot more fun than getting the lawnmower started after a long Winter.

There are a lot of things coming up in May. The regular Club meeting is our annual A.R.R.L. Night. Bob Atkins, KA1GT, author of "The New Frontier" column in QST will be the speaker. Hugh Turnbull, W3ABC, the Atlantic Division Director, and Kay Craigie, KC3LM, Section Manager for Eastern Pennsylvania will also be there. This has always been a very popular Club meeting program and I hope to see you all there.

Also in May is the final contest preparation meeting Thursday night at 8:00 P.M., May 25th, at the home of Phil, WA3NUF. On Saturday, May 27th, there will be an expedition to the contest site in FNØ1 to clear the undergrowth on the mountain-top and to set up a contractors pole for commercial power. Everyone planning to go on the June contest trip should make plans to be at the May 25th meeting at WA3NUF's and finalize all the plans and the transportation arrangements.

Last, but not least, Saturday, May 20th, is Ladies Night. Doc, K3GAS, has arranged a good banquet with excellent entertainment. Make plans now to attend this event and send your reservations in soon. I have always had a great time at Ladies Night and I know you will enjoy this evening.

73,

Bob, N2SB

Meet the Speaker dinner will be held with our guests from the ARRL prior to the May meeting at the Village Inn, located at the intersection of Hampton Ave. and Second Street Pike (Rt 232). Reservations are for 6:15 PM May 18. Please contact WC2K 609-268-0736 if you plan to attend.

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DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING: THE THIRD THURSDAY OF THE MONTH. SWAP SHOP ITEMS - NO CHARGE

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PACK RAT REPEATER 222.98/224.58 MHz - W3CCX
LOCATED IN CHURCHVILLE, PA.

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WC2K, RICK CONNOR
609-268-0736

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WB3DNI, PAT CAWTHORNE
215-672-5289

MONDAY NIGHT NETS

7:30 PM - 50.125 MHz
8:00 PM - 144.150 MHz
8:30 PM - 220.125 MHz
8:30 PM - 224.58 MHz
9:00 PM - 432.110 MHz
9:30 PM - 1296.1 MHz

NET CONTROL

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* * *



THE AMERICAN RADIO RELAY LEAGUE

OST

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CALENDAR OF COMING EVENTS

By Harry Brown, W3IIT

MAY

- 3 EME lunar perigee
- 4-6 Aquarids meteor shower. Predicted peak May 6 at 0228z.
- 5 ARRL 903 MHz Sprint contest, 7-11 PM local time. VE3LNX suggests 432.1 for liason.
- 7 Bergen Amateur Radio Assn. hamfest at Bergen Community College, 400 Paramus Road, Paramus, NJ. Talk-in: 146.19/.79 RPTR.
- 7 TriCounty Radio Assn. hamfest at Passaic Twp. Community Center, Sterlin NJ. Talk-in: 147.855/.255 RPTR.
- 10 Pack Rat executive board meeting at QTH of K3GAS, 8 PM. Wednesday.
- 11 ARRL 1296 MHz Sprint contest, 7-11 PM local time.
- 18 Pack Rat general membership meeting at the Southampton Free Library, 8 PM. Annual ARRL Night with guests K1GT, W3ABC, KC3LM. Nominations for club officers. Pre-meeting dinner at Village Inn, 6:15 PM.
- 18 ARRL 2304 MHz Sprint contest, 7-11 PM local time.
- 19-21 1989 Eastern VHF Conference at Rivier College, Nashua, NH.
- 20 Pack Rat annual Ladies Night Banquet, Warrington Motor Lodge, 6:30 PM.
- 20 Ephrata Area Repeater Society hamfest, Ephrata, Pa. Talk-in: 144.85/145.45 RPTR.
- 21 Tomaqua Transmitting Society hamfest, Tomaqua, Pa. Talk-in: 146.07/.67.
- 21 Warminster Radio Club hamfest at the Grange Fairgrounds, Wrightstown, P Talk-in: 146.09/.69 RPTR. One of the best in the Phila area!
- 19-21 ARRL Atlantic Division Convention at Monroe County Fairgrounds near Rochester, NY. Talk-in: 146.28/.88 RPTR.
- 25 Final Pack Rat W3CCX/FN01 contest preparation meeting at QTH of WA3NUF. This is a THURSDAY evening; meeting starts at 8 PM.
- 27-28 ARRL 50 MHz Sprint contest, 7-11 PM local time.
- 31 EME lunar perigee

JUNE

- 8 Pack Rat executive board meeting; QTH to be announced.
- 9-12 W3CCX/FN01 June contest expedition.
- 15 Pack Rat general membership meeting. Final meeting for Library 'till Fall. ATV program by K3ZKO. Election of club officers.

PROPAGATION REPORT
Paul Drexler, WB3JYO

We have not quite been affected by the classic spring tropo yet here in Pack Rat territory. Activity in the 144, 220, and 432 Sprints was about average; propagation for those events ran also about average for the time of the year. There have been a few short openings to South America reported on six meters, however the solar flux has been down, keeping the big openings non-existent. WA3FFC was operating the 432 Sprint from the W3CCX June contest site on the evening of April 26. He had a terrific signal for the entire time he was active. Scott was anxious to work Pack Rats that evening, but only a few were around on the band. Keep your 220 club repeater rigs on guys! At the conclusion of the 432 Sprint, WC2K worked W3KWH EN90 on 2304 with 449/569 sigs. W3KWH was running 1 watt output to a five foot dish. Then, Rick was called by W3QIZ FN00 on 2304 and they worked with 559/579 signals. Lynn runs 10 watts out to some loop yagis. That's about it for April - see you in the upcoming sprints. Emil Pocock, W3EP, is collecting logs and other information for an article on the Great Aurora of March 13-14 1989. He would welcome logs for any VHF band during this period. Many stations noted auroral-E propagation on 50 and 144 MHz and comments or log notations which track this switch in propagation would be most helpful. Send logs and comments to Emil Pocock, W3EP/1, RR 3 Box 70, Route 207, Lebanon, Connecticut 06249.

NEW CHEESE BITS LISTING
Rick Connor, WC2K

In order to recognize the activity of our members and display the results of pursuing the VHF/UHF bands, I would like to begin a monthly list for this newsletter of the grid squares worked per band by Pack Rats. If you'd like to be listed on any or all bands, initially submit to me a list of grids worked and then simply update your totals via the club repeater, in person at meetings by phone, or by mail. Many of our members have achieved the VUCC certificates offered by ARRL headquarters and many of you that have not kept a tally may be closer than you realize to earning one. These handsome awards are really the first tangible goals that VHFers have had available since before grid square use, only the WAS and WAC awards could be sought. The listing will hopefully demonstrate the hard work of our members as well as inspire the inactive fellow to get on the bands!

TID BITS

- Sad to report that K3EPB, Howard Fretz, became a silent key earlier this year
- K3VIT, Tom Jenkins now back from Michigan with a "Leader Dog". This will allow Tom to get about more often. Good Luck, OM.
- Happy to report that Rick and Janice Connor are parents of a new and healthy 7# 11oz son named Timothy Carl. Mother and baby are doing great!
- N3CX and N2SB traveled to the W3CCX FN01 contest site on April 22. They inspected the area for the operation layout and dug a post hole for the AC power drop. They reported on 2 meters from the site that all looks good from the mountaintop.
- N3EAX, Tom worked 23 Rochester VHF Society members during the January contest to earn the first award offered for that achievement. Nice going, Tom!
- Did any Pack Rats attend the Dayton Hamvention this year? If so, please send a report of the event and your experience to the Cheese Bits editor.

SWAP SHOP

FOR SALE: Air Compressor-Homebrew-20 Gal Tank, 1/3 HP Motor. Estimated 1-1.5 CFM @ PSIG. W/regulator, gauges, automatic pressure cut-off. Not pretty, but it works - \$65. MFJ 1229 CW/RTTY Interface for your home computer. Will supply cables to interface a Kenwood low band transceiver to a C-64 Computer (Air-Disk Software Supplied). Can be made to work w/any radio/computer combination - \$75. Commodore C-64 Computer-Working-less power supply. W/fast-load, manual and an 8-Inch Setchell Carlson B/W Monitor/Cable. Ideal Spare computer and shack size monitor - \$60.00.

CONTACT: RON WHITSEL, WA3AXV
PHONE: 215-355-5730
after 3 PM

FOR SALE: National NC 303 rcvr-all bands, xtal calibrator, good condx - \$65. Radio Shack TRS 80 Computer Monitor/w/pwr supply - \$25. Empire 8 track AM/FM Multiplex stereo w/Garard Turntabel & 2 spkrs-all in good condx - \$30.

CONTACT: DOC CUTLER, K3GAS
PHONE: 215-635-1078

FOR SALE: Cushcraft trap vertical ground plane antenna 10, 15, 20 m w/support pipe-tech data - \$10. Alan, 50V10 step attenuators, 0-10db, 1.0db steps; 1 watt, 50 Ohms max swr 1.4:1 @ 2 GHz, insertion loss. .4db @ 2 GHz. One SMA connector, one "N" connector, spec sheets - \$25. each.

CONTACT: ROBERT G. FOX, W3GXB
1776 Street Rd.
Southampton, PA 18966
PHONE: 215-322-6248
evenings

FOR SALE: From the Estate of W3DHM, Howard Green: 4-antenna twrs-(1) 100' guyed; (2) E-Z way, (1) tilt-over.

CONTACT: Mrs. Green
528 Old Forge Rd.
Media, PA 19063
PHONE: 215-459-0656

FOR SALE: Midland 13-509 220 MHz xcvr w/9 sets of xtals including the Pack-Rat freq. Includes built in receive pre-amp. Plus a 5/8 wavelength mobile ant - \$150.

CONTACT: MIKE BORTULIN, K3BOY
PHONE: 215-666-5344

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THE FOLLOWING MEMBERS OWE DUES FOR 1989
VIA Doc, K3GAS

N3AHI	W3FGQ	WB3KES	WA2OMY
N2AQJ	WB2GEZ	K3KVS	AC3T
WB2BJH	W2HX	NF2L	KS2T
WB3CTP	WB3IGR	KA3MGB	WA3TSE
W3CXU	WB3IND	WA3NDE	W3VIR
N3EAX	K3IPM	AK3O	WA3YDZ
K3ESJ	WB2JHG	WB2RVX	AA2Z
K2EVW	K3JJZ	W3RZU	KC7Z

If you have recently paid your dues, then kindly disregard this note.

VISITORS - APRIL 20, 1989 MEETING

N3FNW - Dewi Williams - Glenside, Pa.
K2TXB - Russ Pillsbury - Tabernacle, NJ

CHANGE OF ADDRESS

WC2K - Rick Connor
412 Carranza Road
Tabernacle, NJ 08088
609-268-0736

15th ANNUAL EASTERN VHF/UHF/SHF CONFERENCE

The 15th Annual Eastern VHF/UHF/SHF Conference will be held May 19-21, 1989 at Rivier College, Nashua, New Hampshire. Rivier College is located near Route 102 a short distance north of the Massachusetts border. The program features a Friday night hospitality room including an informal "swap-fest", technical talk by well-known VHFers on Saturday, "rap sessions" for various VHF/UHF bands on Saturday evening, noise figure measurements on Sunday, and other activities of interest to the VHF/UHF experimenter and operator.

The conference registration fees are unchanged from last year: Preregistration (prior to May 5) is 16 dollars. First-time attendees pay \$14.00. Novices pay \$10.00. Registration at the door will be \$20.00, so it pays to send in your money in advance! The buffet style banquet on Saturday night will cost \$18.00, payable in advance. The registration chairman is David Knight, KA1DT, 15 Oakdale Ave., Nashua, NH 03062.

Again housing will be available in dormitory rooms at the college. The rates are tentatively \$27.50 single, \$45.00 double (with twin beds) per night, payable by May 5. There are numerous hotels and motels nearby for those wishing to make their own arrangements.

The 15th Eastern VHF/UHF/SHF Conference is sponsored by the Northeast VHF Association. The conference chairman is Tom Kirby, W1EJ, ably assisted by volunteers from the New England VHF community. Point of contact: Lew Collins, W1GXT, Publicity Chairman, 10 Marshall Terrace, Wayland, Mass., 01778.

UPCOMING EXPEDITIONS

- FM03..... June 9-16 by WA3HMK. To be active on 50, 144, and 432 MHz.
- St. Martin (FS)..... June 7-13 by WA4VCC. To be active on 50, 144, OSCAR.
- FN01..... June 9-12 by W3CCX. To be active on 50 through 24,000 MHz.

FCC WILL NOT HOLD 220 MHz HEARINGS
From W5YI Report

According to Arthur Kay, W5APX, the information reported elsewhere that the FCC will hold public review hearings on the 220-222 MHz reallocation is unfortunately not true ...and has been known to be not true for several weeks.

W5APX has been active in mailing letters to Congress on the 220 issue. He received a letter dated February 14 from Senator Jim Sasser (D-TN) originally stating that the FCC had informed the senator that such hearings would be held. Shortly thereafter, various hams involved in the general effort as well as the ARRL, checked out this information and found that the FCC had made no such decision.

Confirming this information in another letter from Senator Sasser to W5APX, which stated: "In my letter to you dated Feb. 14, I mentioned that the Commission would hold public review hearings sometime within the next two months to examine the issue. I regret to inform you that this information is inaccurate. It appears that an official with the FCC erroneously told a member of my staff that a decision to hold public hearings had already been made when in fact it had not."

"This being the case, I have again contacted the FCC to strongly urge every favorable consideration to scheduling public hearings to openly discuss this matter. I have also requested that I be kept informed of any action taken by the Commission in this regard, and I will be in touch with you as soon as I receive information." Even if the FCC were to hold hearings to review the FCC action reallocating 220-222 MHz to business interests, it would not necessarily be an indication that the decision would be changed (absent court action), in light of the fact that Congress declined to pass any legislation that would direct the FCC to roll back the reallocation.

COMMERCIAL INTERESTS VIEW 220-222
From W5YI Report

Mark E. Crosby, is president and managing director of the Special Industrial Radio Service Association (SIRSA), which represents radio users in industries such as agriculture, petroleum, mining, and construction. He recently told an audience at a Washington, DC mobile radio conference that SIRSA is taking a low profile on the 220-222 MHz issue "because I really don't want to do battle with the amateurs." "They have been extremely successful in communicating their desires to Congress and to the FCC to retain everything in the 220-222 band. If the FCC were to allocate that spectrum to us, we'll use it - we'd love to use it."

"Will there be a product there? I don't know whether Motorola... or any other major manufacturers even have any interest in producing a product line in only two megahertz. Right now, the first thing we have to worry about is handling the amateurs. They're very vocal."

THE HISTORY OF 28.885

Ever wonder how the 28.885 international 6 meter coordination frequency got started? It was established in 1976 by Ed, Ka5CEB (now N5JEH) and Earl, K2QWD. It was started around 28.575, but QRM soon made them move up to around 28.625. There again, QRM caused them to move in early 1977, this time to 28.885, where it has remained. They believed a net frequency of this type was needed for exchanging 6 meter information that could not be passed on 50 MHz. due to loss or lack of propagation. Today, it is recognized as the International 6 Meter Coordination Frequency, and 6 meter ops around the world can be found there. TNX World Radio Magazine.

ARRL ENDORSES 6 METER SUBBAND EXPANSION
From Westlink Report

The ARRL has said "yes" to expanding the six meter repeater subband down to 51 MHz. The League did this in its filing of reply comments on Docket 88-527. The ARRL said that it completely agreed with the Commission's view that it was desirable to expand the repeater subband but that it was also cognizant of the need to protect operations like the 51.0 to 51.1 DX window. However, the League also feels that through development of a revised band plan, the weak signal operations can easily be protected. Its reply comments concluded by re-emphasising the opinion that the expansion of the six meter repeater subband to include 51 to 52 MHz was in desirable and that it can be accommodated on a planned and coordinated basis within the Amateur Radio Service itself without relying on any FCC regulatory restrictions whatsoever.

UHF BEACON UPDATE

Here is a list of beacons on the UHF bands which are within useful range of Pack Rats:

<u>BAND</u>	<u>FREQUENCY (MHz)</u>	<u>CALL</u>	<u>GRID</u>
220	220.055	WB4FQR	FM18
432	432.074	WA4PGI	FM18
432	432.075	WLUHE	FN41
432	432.070	N2CYM	FM29
903	903.080	N3CX	FN20
903	903.055	W3VD	FM19
1296	1296.070	N3CX	FN20
1296	1296.053	K3IVO	FM19
2304	2304.030	N3CX	FN20

SIX METER NEWS
DE World Radio

On January 25, while in Miami on business, Donald Murden, PY5ZBU (G3MWM) submitted his application and QSL's (104 confirmed) for 6M DXCC to the ARRL. His cards were sent by special delivery, and they have been lost by the agency that forwarded them. As of March 6 they had not arrived at ARRL. A word to the wise- send your QSL's via registered mail, or if in the United States, by US mail overnight service or UPS overnight service, for the best protection. You worked 10-40 years or more for 6M DXCC; why risk losing the cards just to save a few dollars? This is the first reported DXCC application for 50 MHz. Close behind Donald is VELYX with 88 countries confirmed.

Twenty five Swedish amateurs were finally granted 6 meter privileges recently. There is no restriction on their times of operation, although there is no operation permitted within 150 km of a TV transmitter. From 150-200 km away from a TV site there is a 3W ERP authorization. From 200-250 km, the limit is 10W ERP. Beyond 250 km, the authorization allows 50W ERP. Kjell, SM7BAE, has the 50W authorization and should be very active.

The Luxembourg government recently denied its amateurs access to 6 meters. It is too bad that their operators won't be able to join the Swedes. They are being denied the opportunity for involvement with the study of 50 MHz propagation and solar activities to which other European countries are already contributing.

TAKE OUT YOUR QST, PLEASE

Atlantic Division Director, Hugh Turnbull, W3ABC wants to read your analysis of the no-code license proposal published in the May QST. This is a time for rational discussion, not emotional outbursts, and YOUR thoughts count. It's important to read the whole proposal, not just the highlights of it. Don't rely on rumors or claims about what the proposal says. What do you think is in the best interests of the Amateur Radio Service? Write your comments to Hugh. Find his business card ad inside front cover of Cheese Bits, Pack Rats and other VHF/UHF enthusiasts should be especially interested in the proposal since the proposed "playground" for the new license class will be in the spectrum which we use.

Also, Pack Rats have been interested in obtaining a complete list of two ARRL advisory committees which directly affect our operating. One is the list of members on the Contest Advisory Committee (CAC) which is currently reviewing our petition to accept contest logs from handicapped members who can not attend the required two in-person meetings per year. The other committee members of interest to us are those who make up the VHF/UHF Advisory Committee. You will find a complete listing of the members of these and other League advisory committees on page 70 of May QST.

FCC PROPOSES NEW BEACON SUBBANDS ON 2 METERS, 70 CM From the ARRL Letter

In response to an ARRL petition filed last September, the FCC has proposed, in Docket 89-65, to relocate beacon operation in the 2 meter and 70 cm bands. The ARRL petition had requested the changes since present beacon frequencies are very close to those used for moonbounce and other weak-signal activities. The ARRL filed the petition after consulting with weak-signal and beacon users. (Gee, I just don't remember that conversation! - Ed) The Commission said that it agreed with ARRL that the beacon subbands in the 2 meter and 70 cm bands should be relocated. The Commission followed the ARRL proposal to move beacon operation from 144.05-144.06 MHz to 144.275-144.300 MHz and on 70 cm from 432.07-432.08 MHz to 432.3-432.4 MHz.

The ARRL had also requested the Commission to change the beacon subbands on 220 MHz. But as expected, the Commission declined to propose changes in the 220 MHz beacon band at this time, citing its decision to reallocate the bottom two MHz of this band to the Land Mobile Service. Comments on this proposal are due on or before June 12, 1989.

FCC CHAIRMAN RESIGNS From Westlink

In a 3 page letter hand carried to the White House, FCC Chairman Dennis Patrick has tendered his resignation from the Commission. The letter from Patrick outlined the achievements of the Commission under his leadership but gave no reason for his decision to depart his FCC position. Commissioner Patrick has offered to remain at the helm of the FCC until President Bush names a successor and that person is confirmed by Congress. Patrick, 37, was the youngest person ever to be a commissioner when he joined the agency in 1983.

***** DON'T MISS THE MAY MEETING! BOB ATKINS, KA1GT WILL SPEAK *****
ON HIS QST COLUMN "THE NEW FRONTIER" AS WELL AS LASER LIGHT
COMMUNICATIONS FOR AMATEUR RADIO. BE THERE OR (yeah) BE SQUARE!

HINTS AND BITS
By Dave, WA3JUF

There isn't always a signal on the air to check out your receiving system. There are a few beacons, but the higher in frequency you go, the fewer there are. Sometimes you need an on the air signal longer than feasible by another station.

Back in the early 70's, I built a signal source that I have been using ever since. Basically, it's a XTAL oscillator crystallized for 36.0000 MHz. Harmonics can be heard on most bands above 50 MHz. Other crystal oscillators can be used for bands like 220 and 903 MHz. Recently, I added a MMIC amplifier following the 36 MHz oscillator. This provides a little more output to drive a diode multiplier/filter for 1296 and one for 2304 MHz. Soon I'll build one for 3456 MHz.

The 36 MHz oscillator will work well by itself. The output level of the signal source can be controlled by putting the source inside a "waveguide" made of three one-pound coffee cans soldered end to end. On the closed end of the can-guide an RF connector is mounted. Inside the can, a brass disc is soldered to the connector center pin. I put the 36 MHz oscillator inside a glass jar. Moving the jar inside the can-guide gives you a nice output level control of the signal source from zero to full output. I learned this from W3HMU and K3BPP years ago.

For 1296 operation for example, the output of the can-guide is connected to a 1296 MHz coffee can feed horn. Using a diode multiplier/filter and coffee can feed, a nice clean signal can be heard on 1296 MHz. I put the whole assembly up in a tree in the woods out back. Rotating the station antenna gives you a variable level signal source to tune preamps and filters or to just check to see if the antenna and receiver are working. While tuning a preamp or looking for the best preamp, the antenna is rotated so a signal is barely heard. Adjustments are made to improve the signal-to-noise ratio.

Sometimes I'll turn the source on and leave it on during a contest. At any time I can check for proper receiver operation. The 36 MHz source can be heard on 144, 432, 1296, and 2304 MHz. A 37.6300 MHz crystal will give a signal on the 903 MHz band.

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