

**PACK RATS'**

MT. AIRY VHF RADIO CLUB, INC.

# CHEESE BITS



CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC., PHILADELPHIA, PA.

50.125, 144.50, 432.110, 1296.025 Mhz, WR3ACD - Repeater 222.98/224.58 Mhz

Affiliated Club: AMERICAN RADIO RELAY LEAGUE

Meetings : Third Thursday of each month at 8:00 P.M.

Southampton Free Library, 947 E. Street Road  
Southampton, Pennsylvania 18966

ARNS

VOLUME XXII

OCTOBER, 1980

NUMBER 10

THE PREZ SEZ

Last month I talked a little about getting on a new band and at the September meeting, Ron, WA3AXV, gave a great program on how it's done with a 1296 solid state transverter. As usual, Ron was thorough in his presentation with real working hardware, schematics, detailed slides, construction diagrams and to prove it all works, he had QSL cards. See Ron for copies of the presentation and then get started. If you weren't there, you missed another informative Packrat program.

If you missed the September Contest, you missed a lot of fun. For me at least, this is a relaxing contest without the pressures of January and June. Conditions weren't anything like last year, but there was some good tropo - especially Saturday night. The crowd on the low end of 220 reported that activity on cw and ssb was way up with a lot of new calls appearing. Hope their numbers increase and they are there in January - you know there's something about setting the channel switch on an fm box that just doesn't seem like ham radio.

Hamarama and the Mid-Atlantic VHF Conference should be here by about the time you read this. Both are great places for renewing acquaintances and having eyeball conversations with you on the air buddies. Hope to see you at the conference - from the outline of talks and speakers there should be a lot of up to date techniques to be learned (even X-Band SSB). If you haven't decided on where you are going to help out at Hamarama, get on the phone or repeater and let Ron and crew know you are ready and willing - there's a lot of work to be done and the club needs you. An hour or two helping with tickets, parking, or registration will be welcomed by the guys that will be doing these jobs from 6 AM until 3 PM - how about it?

See you at the October meeting and let me know when you need help on those antenna parties.

73, Harry, W3IIT

\* \* \*

ARRL BULLETIN NR 95 FROM ARRL HEADQUARTERS NEWINGTON CT SEPTEMBER 19, 1980 TO ALL RADIO AMATEURS  
BT: Effective September 28, 1980, the FCC will change its telegraphy testing procedure for all of its field offices. Code tests administered by FCC will be of the completion type, requiring the applicant to fill in the blanks. The multiple choice code test will be discontinued. All telegraphy tests will consist of a typical QSO followed by 10 questions with 80 per cent the passing grade AR.

Pack Rats CHEESE BITS is a publication of THE MT. AIRY VHF RADIO CLUB, INC. Philadelphia, Pa. and is published monthly.

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

SWAP SHOP ITEMS - NO CHARGE

DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING: THE THIRD THURSDAY OF THE MONTH

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609-783-9478

CLUB HISTORIAN:

W3CL, HARRY B. STEIN

MONDAY NIGHT NETS NET CONTROL

7:30 PM - 50.125 MHZ	W3CL
8:00 PM - 144.150 MHZ	W2EIF
8:30 PM - 222.98/224.58	K3GAS
9:00 PM - 432.1 MHZ	K3IUV
9:30 PM - 1296.025 MHZ	W3CXU

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WA2DPU, BILL SMITH (2yrs)  
K3NHX, JOE GARDOCKI (2yrs)  
N3AHI, JIM HOLT (1yr)  
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CALENDAR OF COMING EVENTS  
Syllabus by Lee, K3MXM

OCTOBER

- 4 FOURTH ANNUAL PACK RAT VHF CONFERENCE - Warrington Motor Lodge. All day.  
Warrington, Pa.
- 5 HAMARAMA - Bucks County Drive-In Theater, Rt. 611, Warrington, Pa. All Day.  
Sun up till Sun Down (8 AM to 4 PM) We and the Club need your help - volunteer  
your services to one of the committee chairmen.
- 7 WIAW - Qualifying Run - Test your CW ability - 10-35 wpm. See Sept. QSO for times  
and frequencies.
- 9 Board of Directors Meeting - QTH - WA3WAS, Steve Simons, 435 Ivy Street,  
Warminster, Pa. Phone: 215-672-6486. Directors and interested parties always  
welcome.
- 12 Fall Clean-up time. Treat yourself to a new broom and mop.
- 13 Columbus Day
- 16 General Club Meeting - Southampton Free Library, Street Road, Southampton, Pa. 8 PM.  
Topic: To be announced on our Monday Nite Nets. The Mario Raffle, Frankie's Silent  
Auction, Refreshments. An open meeting to one and all. Bring your VHF friends...
- 18-19 Jamboree on the Air - Help keep the Scouts on the air - make contact with them.
- 20 McArthur Lands in the Phillipines "I have returned..." 1944
- 21 First Radio Telephone Transmission cross the Atlantic, 1915.
- 21 To our English Friends - Trafalgar Day
- 25-26 CQ - WW DX Contest, Phone, Chance to get your DXCC
- 25 Sunday AM - Daylight Savings Time Ends. Remember FALL BACK - pick up that hour  
you lost in the Spring.
- 31 BOO - Halloween - The goblins will getcha if you don't have lotsa candy!!

\* \* \*

REPORT FROM THE CAC

By Bill, W3HQT

Dave Sumner, K1ZZ, and I have been discussing a change in the UHF contest rules to make distant contacts worth more points. A lot of the European VHF contests have a system like that. Problem is how to do it without making the rules so complicated that everyone is scared away? One solution is to have a 3 category scoring system where contacts with a station's own gridblock and all the contiguous blocks count one point, contacts with blocks out to approx. 250-300 miles count 2 points, and contacts beyond, 3 points. Existing band multiplier would, of course, still apply. While not specifically eliminating FM from this contest, this new ruling would certainly encourage the "DX" modes. It also makes the contest more fair for stations out of the densely populated "Golden Corridor" areas. Comments?

Talked with Tom Frenaye K1K1 at ARRL. Asked him if he thought it might be possible to run a VHF contest possibly June without FM on a trial basis. He said it would be up to the CAC but that it would probably be no problem. I will talk to K8MR, CAC Chairman, and get it on a CAC ballot before the June contest rules go to print. The rules would probably be changed to eliminate FM above 146 MHz. He also plans to specifically outlaw the soliciting of FM simplex contacts on repeater frequencies for all VHF contests. Sure would like to hear some comments or suggestions from out there, guys.

By Lyn, W3NSI

1. MINI COUNTER: Ramsey Electronics has available a very small counter, the Mini-100. This 7 digit unit is rated from 1 MHz to 500 MHz at 2 ppm. Sensitivity is better than 25 Mv over the above range. Price: Kit \$60, Wired \$80. Box 4072, Rochester, N.Y. 14610.
2. GENERAL COVERAGE RECEIVERS: The new Radio Shack catalog shows two new receiver units. The DX100 is a four band single conversion radio which should be of interest to the new ham. The second set is the DX200, a 5 band single conversion radio with separate band spread and main dials. A 500 KHz calibrator is built in. Of course, both sets are all solid state. Price: DX100 \$100. DX200 \$230.
3. INDOOR TUNED ACTIVE ANTENNA: MFJ Enterprises, Inc. now has a very interesting product addition to their line of ham equipment. The MFJ 1020 measures 5x6x2 inches, and contains a tuned amplifier covering 300 KHz to 30 MHz in 5 bands. A small whip antenna is used in this receive only unit, however, an external antenna may be used. Price: \$80. Box 494, Mississippi State, MS 39762.

\* \* \*

VHF/UHF REPORT

By Joe, W2EIF

The VHF/UHF bands have not shown much activity this past month. The September QSO party created the only activity of note. There were no big openings as per last year and conditions were average throughout the test period. 2 meters had the usual good activity at the low end. The big surprise, however, was the resurgence at the low end of 220, where for the first time in years, there was lots of cw and ssb signals available from Ohio to Maine. It proved how good the 220 band can be for weak signal work. I am sure that 220 stations running power and good antennas in NC, WNY, VT and other states and Canada within 400 miles, could do well in the contest. Certainly every bit as good as 2 meters. As an example, I worked Ohio (W8VP) and Maine (K1WHS) before I was able to do it on the other bands. There were at least 17 sections available to the East Coast operators.

VELASJ in a letter to N3AHI, has listed the following calls for possible F-2 contact this Fall. EL2AV, 9Y4JW, YS1ECD, 5NØROR (Oct. 4-11) EI2W, EI6AS, EI9D, ZB2BL, ZB2CF, I5TDJ, PAØXXB, 5Z4YV, ZD8TC.

NOTE: N3AHI, WA3AXV and WA2DPU worked VP9IB on 2 meters Saturday afternoon, Sept. 20, 1980. K2RIW worked VP9IB that day also on 432 MHz.

\* \* \*

WE NEED MORE CONTESTS

With the three big VHF contests we have and the smaller VHF and EME ones, this may sound a little strange, but there's a little more to it. In a moment of weakness, I bought a bundle of issues of RSGB Radio Communications from fellow Pack Rat, Lee, K3MXM, at one of the hamfests last Summer. Like a good Packrat, I quickly scanned them for the VHF/UHF articles, their VHF column (4-2-70) and even a rundown of their contests. The review of their contests is where I really got a surprise - for an organization with a little over 20,000 members (in 1977) they sponsor an incredible number and variety of VHF contests. I counted somewhere around 18 to 20 separate events with a rough rundown as follows: 70 Mhz cw, 432 fixed, 144/432 SWL, 70 Mhz open, 1296 open, 432 open and SWL, 144 cw, 432/1296/2304, 144 portable, microwave, VHF National Field Day, 144 QRP, 70 Mhz open and SWL, 144 open and SWL. Note that these are all separate contests throughout the year - not just categories of one contest. As you can see the variety is something we don't have here - their contests are specialized so you can go all out on your favorite band without worrying about what band is open at the moment, what mode has the most activity, etc. You might think that 18 to 20 weekends a year operating contests may break up your happy home, but this isn't the case since most of the contests are short - typically 4 to 8 hrs. and one was 24 hours. The 432 Cumulative contest was interesting in that it ran 2 1/2 hrs, one night a week, for 7 weeks. Anyway, it's food for thought - maybe we should consider some short one band, one mode contests in addition to the big productions we get involved with 3 times a year. Think about it a bit and let the ARRL know if you're interested. I have no idea how receptive they might be so maybe some of the larger VHF clubs in the country might consider sponsoring one. The "cumulative" type of contests might add some interest to 220 SSB/CW night, 1296 night, etc. 73, Harry, W3IIT

SWAP SHOP

FOR SALE: Galaxy 5 Mark 3 xcvr - 500 watts, input - 80 thru 10 - ssb&cw. \$175. Legg Venus, 6 mtr. SSB,CW,AM - 90 watts input \$250. Heathkit HW20 - separate VFO for transmit & receive, modified for FM \$30  
CONTACT: Earl, N3EG  
Phone: 215-387-1044

FOR SALE: HQ170 - 6-160 Mtrs. Good condition \$170. Viking Valient - good condition, \$190 or best offer.  
CONTACT: Tom Hoyer, WB3FED  
Phone: 215-887-7989

FOR SALE: Model 19 Teletype complete, nearly new. Alltronics Howard Model "L" converter, dual unit. Four (4) Model 15 teletypes. Many #15 & #19 parts. Make offer - cash or trade - what have you.  
CONTACT: R. Hairsine, K3MPZ  
Phone: 302-994-6878

FOR SALE: 8X10 tent- like new \$40. 17" chain saw - self sharpening, automatic oil - needs new guide bar \$100. 220mc converter-nuvistor w/power supply \$10. 432mc convertor-solid state \$15. U-100 TV rotator \$10. 40 pint dehumidifier 1 yr. old \$145. 1100W electric heater - 110V \$5. SB-600 speaker \$5. Midland 450-470 scanner 3 channel pocket-no crystals \$20. Chiltons service manual 1977 \$5. (4) 6146A - new \$3. each. (2) 3ft 19" open stand up racks \$5. each. Transformer good for 2000 VDC @ 850 ma continuous \$30. 4X150A 2 mtr. class "C" amp works - no blower \$20. (1) roll RG-58/a mil spec approx. 100-150 ft. \$7. 100 pounds chlorine powder for pools, never opened \$70. 50 mc homebrew KW - pair 4CX-250B's no power supply \$125.  
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\* \* \*

FROM HR REPORTS

MORE FCC LICENSE FEE REFUNDS are to begin shortly, as the Commission begins Phase II of its fee refund program. Under the Phase II program, all applicants who paid the FCC license fee of more than \$4 but less than \$20 between August 1, 1970, and February 28, 1975, are eligible for refunds. Almost all Amateurs who held licenses during that period should have a refund coming, but CBers, whose license was only \$4, will not.

To Apply For A Refund, request an instruction book with refund form from any FCC Field Office, or write the FCC Fee Refund Program (Phase II), Box 19209, Washington, D.C. 20036. Specific questions about the program can be answered by calling a special toll-free number. (800) 424-2901. Applications will be accepted until December 15, 1982, though applicants are urged to submit requests before next September 1. As a very large number of requests are expected, applicants should expect considerable delay.

Phase I Of The Refund program, recently completed, resulted in about \$49,000,000 being returned to FCC licensees. Phase I covered only fees of \$20 or above.

377,615 INDIVIDUAL AMATEURS were licensed in the United States at the end of July, continuing the increase noted every month this year. The 385,625 end of June total cited in HR Report 313 was actually station licenses; at the end of July they totaled 388,115.

220.1 MHZ WAS ESTABLISHED as the national calling frequency for that band at the recent Central States VHF Conference. Until the end of October W1JR will be on 220.1 daily, alternating CQs and listening, weekdays 1115-1130Z and weekends an hour later. An SASE to W1JR will bring complete details. Thanks W1JR.

REPORTS OF THE BIG 2 METER OPENING July 15-17 are sought by W2BOC for his propagation research effort. Details on who worked whom, times, signal reports, and observations about any unusual effects will greatly help his work. Thanks SMIRK.

French 6-Meter Operation has been approved by French authorities, though individual Amateurs must get an OK from the French TV agency before operating. About a dozen stations, including F9FT and F8SH, have applied. T3AZ should be on 6 through September 23, and YJ8YS 's reported active. Thanks SMIRK. W9JUV.

TID BITS

Heard checking in on Monday Nite Nets from their new locations: Steve, WA3WAS (Hatboro, Pa.), Earl, N3EG, (W. Phila., Pa.)

Congratulations to Jim Holt, N3AHI who received his "worked all Canada award on VHF" (a most difficult task). He received the necessary QSL card from VE5LY.

Thanks to the new refreshment committee volunteers: Bill, W3HQT, Rich, VE7BUT/W2, and Dave, WB2VLA. W3CL and K3DLS have gracefully retired.

Frank Baxter, W3ID, announces a VHF traffic net operates on the 66/06 repeater at 9:30 PM Mon., Wed., and Fri.

New membership directories are in preparation. Please advise the editor of changes, ie. license expiration dates, etc.

United Nations Station 4U1UN is on the air every Wednesday and Saturday mornings on 50.110 Mhz. (Thanks to WA2DPU) (QSL via W2MZV - thanks to W2AXU)

New members who do not have a club Pack-Rat badge please notify Doc, K3GAS, so he may order one for you (this is on the house).

W2AXU reports the monthly mean number for August 1980 was 135.4.....

Saturday, September 6th, was a night to remember by Bill Olson, W3HQT. A neighbor was clearing brush by fire to make way for a house construction. He left the scene that evening after smothering the last embers (or so he thought). That night Bill told about the "Wall of Flame" that was moving toward his house. Four volunteer fire companies from two counties responded to the alarm - unbelievably, Dan Mitten, WA3NEV, a member Pack-Rat, was the first to respond with the Trumbauersville Fire Company. Bill spent the evening doing the "second alarmer" stint of providing coffee and refreshments to the hard working firemen. Needless to say, his house was saved, but he lost a lot of wood for use in his stove this coming Winter - You can't have everything Bill!  
\* \* \*

LIGHTNING STORMS IN THE DELAWARE VALLEY CAUSED SOME DAMAGE TO THE ELECTRONIC & ELECTRICAL DEVICES OF SOME OF OUR MEMBERS THIS PAST SPRING AND SUMMER. THE LIGHTNING PROTECTION HINTS IN THE FOLLOWING ARTICLE SEEM APPROPRIATE.

FROM THE "CIRCUIT BOARD"

Kap's Column

By Jordan Kaplan, W9QKE

The summer months have raised the spectre of storms and heavy rains in our area. With the storms come lightning discharges that have caused damage to the stations of some of our members, amateur repeater sites, and also quite a lot of the VHF/UHF commercial installations in the Mid-west.

A ground connection for your station is of course, good engineering practice. Obtaining A Good Ground is easier said than done. In our area, just below the soil, about a foot or so, can be found a clay mix of some sort. The best approach would be to extend a copper rod or tube 8 to 12 feet below the ground level. A ground rod should be connected to each leg of the tower, and at the point of entry to the house, of the transmission line.

At the entrance to your house, multiple ground rods should be placed in a triangle layout, and all rods should be electrically connected together so as to provide the lowest resistance path to ground for the station.

At the station, all receivers, transmitters, test, and monitor items plus the antenna tuner should be tied together to the same common ground.

The exact details of how to do this have appeared in the popular amateur radio magazines during the last year. If you have followed the above suggestions, you may feel free to breathe easier...but not so fast...

(CONTINUED ON PAGE 7 )

Kap's Column Continued

Two other paths remain open for the electrical discharge to get to your station and cause damage often of a permanent nature. A path still exists to bring the electrical energy from a strike into your station via the transmission line. That's right. The transmission line goes right up to the tower, and a strike on the tower, or antenna could result in your station getting whacked. You have a few options left. One would be to ground all antennas thru the transmission lines at your station to the station ground. That means that each time a forecast of heavy storms is made, you should disconnect the transmission lines from the station equipment, and connect them to a series of 83 chassis connectors that have been shorted and connected to the station ground.

To expedite the grounding of the transmission lines, some stations use type C connectors. These are the large size versions of the BNC's. A simple twist and the connection is removed from the equipment terminal and pushed onto the grounded connector, a slight twist and the line is grounded.

Another method would be to use one of the lightning protectors on the market, such as, the Hy-Gain LA-1. This device is inserted in the line and is grounded to the tower, or at the station ground prior to being brought into the house. After all the idea is to keep the strike out of the house!

The last path is thru the AC line. A station power line disconnect is an easy way to safeguard the station from a powerline discharge, and as a special extra to also keep the station under your control while you are away from the house.

\* \* \*

Foundation For Amateur Radio, Inc. Washington, D.C.

August 14, 1980

For the Scholarship Committee from Hugh A. Turnbull, WBABC, 6903 Rhode Island Avenue College Park, MD. 20740

PRESS RELEASE

The FOUNDATION FOR AMATEUR RADIO announces the 1980 winners of the seven scholarships which it administers.

The John W. Gore Memorial Scholarship (\$900) - Darryl F. Mihalek, WB4JZT, Charleston, S.C.

The Richard G. Chichester Memorial Scholarship (\$900) - Katherine Hevener, WB8TDA, Franklin, W. Va.

The QCWA Silent Key Memorial Scholarship (\$900) - Maureen Porter, KA0BSR, Denver, Colo.

The Radio Club of America, Inc., Scholarship (\$500) - Brian D. Miller, KA0DGT, Englewood, Colorado

The Edmund B. Redington Memorial Scholarship (\$500) - Gregory Polanchyck, N3GP, Frackville, Pa.

The Edwin S. Van Deusen Memorial Scholarship (\$350) - Nicholas A. Ferro, Jr., WA2SFS, Lake Placid, N.Y.

The Young Ladies Radio League (YLRL) Scholarship (\$300) - Ann Waines, KA8CSM, Shelby, Ohio

These scholarships were open to all radio amateurs holding at least an FCC General Class License or equivalent. This year's applications were received from 31 states and Denmark. The FOUNDATION is a non-profit organization representing fifty-one clubs in Maryland, the District of Columbia and Northern Va. It is devoted exclusively to promoting the interest of amateur radio and to the scientific, literary and educational pursuits that advance the purposes of the Amateur Radio Service.

Information regarding the scholarships to be awarded next year will appear in the May 1981 issues of the major amateur radio publications.

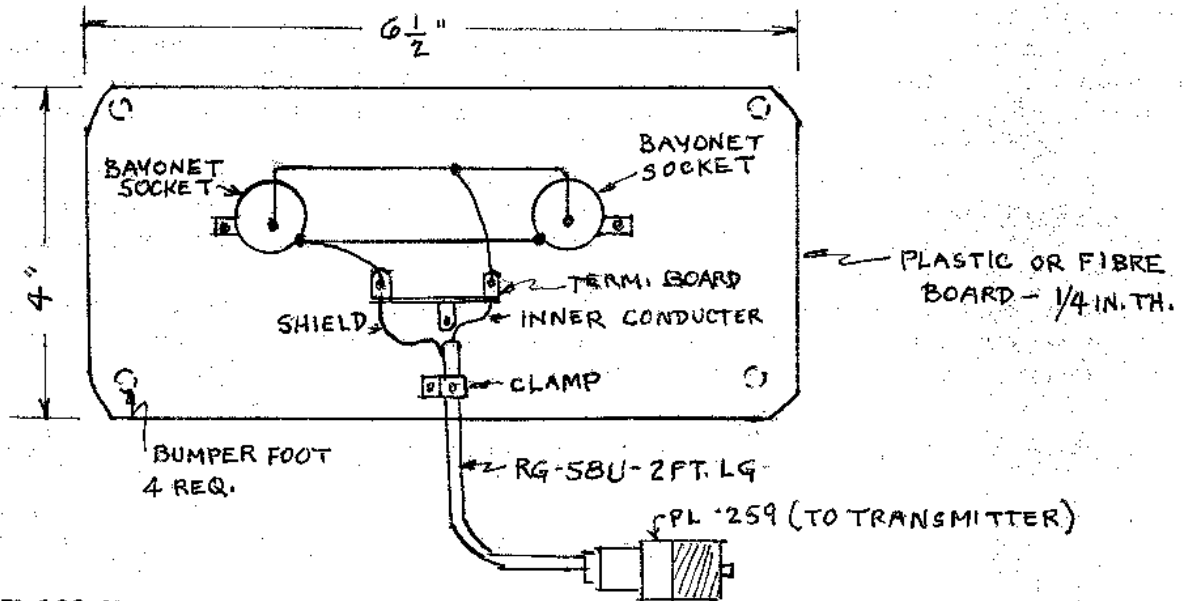
\* \* \* \*

Lee's Space Fillers

Did you know that during October and November that Sundial Time is a full half-hour different from clock time - the greatest discrepancy during the whole year. Better tell Amtrack to get their dial repolished and adjusted.

## A SIMPLE 200 WATT DUMMY LOAD

The cheap, junk-box dummy load described below was designed by Joe, W3TEC and submitted for publication in Cheese-Bits. He says it could come in handy for the medium powered boys and help keep tune-up signals off the air. Thanks Joe



2 GE Type BMY 100 Watt - 115-120V. required  
(bayonet base)

\* \* \*

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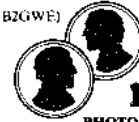
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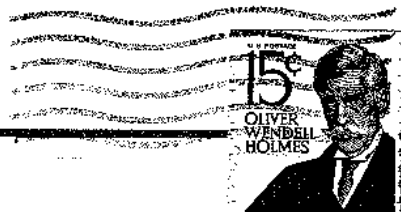
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