



**PACK RATS'**

**CHEESE**

**BITS**



**PACK RATS**

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

MT. AIRY V.H.F. RADIO CLUB, INC., PHILA., PA.  
(50.2, 145.2, 221.4, 432.3 & 1296.3 MC)

AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE

MEETINGS: THIRD WEDNESDAY OF EACH MONTH AT 8:00 P.M.

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VOLUME V

AUGUST, 1971

NUMBER 8

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THE PREZ SEZ

The Prez-sez, thank you, El, K3JJZ, for the excellent job you did this past year. Not only as president, but also as editor of our Club Paper "Cheese Bits". El, the Club thanks you!

As your new Prez, I will work to keep the Club running as well as it has the past fifteen years. We again have a fine slate of officers and I welcome our two new directors, Dick, W3FQD and Ron, WA3AXV, to the Board of Directors.

Someone once asked me why the Mt. Airy V.H.F. Radio Club was so successful. My answer was this. Because of our mutual interest in V.H.F., U.H.F. and the exploration of these bands; our Club having something for everyone such as our annual August picnic for the entire family; our transmitter hunts, antenna measuring events, and our gigantic Ladies Night for the girls.

The January V.H.F. Contest in which we all participate is a Club project. For this contest we strive through the year to improve our station's gear, and possibly to get on one new V.H.F. or U.H.F. band.

The June, V.H.F. Contest is held out in the field, where all of our Club members get to know each other a little bit better, working together as a team. The June Contest is work, but fun, and I think we all get a lot out of it.

CONTINUED ON PAGE 5

DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING.

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AWARDS CHAIRMAN:

W2EIF, JOSEPH KILGORE  
#5 SUNNYBROOK COURT  
STRATFORD, N.J. 08084

DIRECTORS' MEETINGS ARE HELD ON THE SECOND WEDNESDAY OF EACH MONTH AT DESIGNATED LOCATIONS.

MONDAY NIGHT NETS:

145.2 - 7:30 P.M.  
50.2 - 8:30 P.M.  
221.4 - 9:00 P.M.  
432.03 - 9:30 P.M.  
1296.1 - 10:00 P.M.

OFFICERS: 1971 - 1972

PRESIDENT: W3CJU, Don Hampton  
VICE-PRES: K3BPP, Walt Bohlman  
TREASURER: K3GAS, Doc Cutler  
CORRES. SEC: W3SAO, Francis Brick  
REC. SEC: WA3BIV, Carl Barish

DIRECTORS:

K3JJZ, Elliott Weisman  
WA3AXV, Ron Whitsel  
W3FQD, Dick Hunzinger  
WA3LNH, Charles Benavides  
K3UJD, Mario Fontana  
K3CIV, Ralph Hersh  
(Ex-Officio)

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PACK RATS' CHEESE BITS is a Publication of the Mt. Airy V.H.F. Radio Club, Inc., Philadelphia, Pa., and is published monthly.

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We operate on an exchange basis with other publications and anything that is printed in CHEESE BITS may be reprinted, unless so stated, as long as the proper credit is given.

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EXCLUSIVE NEWS BULLETIN !!

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SWAP SHOP

CONDUCTED BY: W3ZRR, Ray Whitehead  
7329 Shelborne Street  
Philadelphia, Pa. 19111  
215 RA 2-4786

FOR SALE:

6-10-15, Meter Transmitter. 1 KW-NFM or  
650W-AM, air cooled, VFO, foot switch,  
D-104 mike and stand, dow key relax,  
spare final and rectifiers. Reduced Price.

HQ 170A with clock, 6 meter converter,  
preamp, speaker, phones and manual. \$150.00.

HE145B, 6 meter transceiver with VFO, ptt  
mike, 4 el halo, finals, parts, cable and  
manual. Reduced price.

CONTACT: K3DXC, Mel Spiegel  
7972 Gilbert Street  
Phila., Pa. 19150  
LI 8-3522 -- CA 4-9435

FOR SALE:

1 1/4 meter colinear, 20 element Cush  
Craft, \$15.50.

CONTACT: W2BAY, Ed Braddock  
P.O. Box 305  
Haddonfield, N.J. 08033  
609-429-0087

FOR SALE:

Supreme SSB 6 meter exciter (75W, pep)  
with self contained VFO. \$65.00.

Hy Gain 11E1 6 meter beam (48' boom)  
\$75.00.

-8/8's J-slot antenna system, for 2 meter,  
220, 432. Pair. Complete system, \$75.00.

5E1, 6 meter Telrex antenna. \$20.00.

CONTACT: K3IPM, Stan Smith  
133 Hogeland Road  
Southampton, Pa. 18966  
355-2867

Those interested in 2 meter communicator advertised in last month's Cheese Bits  
contact WA3BIV if still interested. WA3BIV, Carl Barish, 215-LI 9-6486.

WANTED:

Seneca Transmitter.  
CONTACT: Roy Moyer, K3RRK  
HA 4-4398

WANTED TO BUY OR TRADE:

Bird Model 43 Thruline Wattmeter  
Plug-ins

Sierra Model 164, Truline  
Wattmeter, Plug-ins

CONTACT: Chuck Benavides,  
WA3LNH/KØZZM  
1218 Meadow Lane  
Perkasie, Pa. 18944  
215-257-5681

FOR SALE OR TRADE:

Millen Grid Dip Oscillator,  
excellent condition

Heath Seneca

Coaxial Relays

CONTACT: Chuck Benavides,  
WA3LNH/KØZZM  
1218 Meadow Lane  
Perkasie, Pa. 18944  
215-257-5681

FOR SALE:

Heathkit 2-r with mobile power  
supply and misc. \$40.00

Home Brew C.W. transmitter with  
built in V.F.O. 803 final.  
1.8 KV power supply; make offer.

CONTACT: WA3IOX, Robert Morlin  
1570 Arran Way  
Dresher, Pa. 19025  
MI 6-8266

CONTINUED PAGE 4

NEW PRODUCTS OF INTEREST TO HAMS

1. Ultra Miniature Indicator Lamps - Solid State - Dialco Co.  
These units combine the advantages of low power drain with long life. Since there is no filament to break or burn cut, they are immune to shock and vibration. Maximum current drain is 20 ma and voltage range available is 3.6 v to 28 v DC. Colors now available are red, yellow, white and clear. Price - \$3.00 each. 60 Stewart Avenue, Brooklyn N.Y. 11237
  
2. Mobile vertical antennas - 450 and 150 Mc.  
The high band version (150) is a 5/8 wave unit with base loading coil, and actually covers 144-174Mc with a 3 db gain. The 450 unit is reported to cover the upper section of the ham 420-450 mc band, at least the part that is used by mobiles in that range. It is collinear two element with a center phasing coil. Gain is reported at 5 db. Various mounts are available, most for use on a roof top, but brackets for trunk lid are priced at \$3.50 in stainless steel. Whips are also stainless silver plated, while coils are enclosed in high impact epoxy. Price range with base - \$27-30. Larsen Electronics Inc. 11611 N.E. 50th Avenue, Vancouver, Washington 98665
  
3. Eastman #910 Adhesive.  
This material seems to come close to being a universal adhesive. It sets fast, usually less than 2 minutes. Virtually any combination of materials may be joined including rubber, fiber, glass, polystyrene, and all metals. No mixing is required (unlike epoxy), and 910 cures at room temperatures. Should be just the thing to mount component brackets and supports where holes may not be drilled thru due to blockage caused by other parts. For more info, contact - Eastman Chemical Products -- Kingsport, Tenn. 37662

W3NSI, Lyn Rowland

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 SWAP SHOP CONTINUED FROM PAGE 3

FOR SALE:

Approx. 400 - 500 ft. RG 17  
 Air. Cheap!

Rohm PT6 telescoping tower 23 inches at  
 base, hinged, galvanized, 50 feet.

Auto-AM radio new in carton, \$15.00  
 with speaker.

RCA cabinet tape AM, SW with 50 watt  
 amplifier, \$10.00

Converter, 80 - 15 meters, \$15.00  
CONTACT: Ben Gindin, K3ESL  
 6504 Roosevelt Blvd.  
 Phila., Pa. 19149

FOR SALE:

220 Mc. Cushcraft colinear, modi-  
 fied for positive contact, \$5.00  
 144 Mc. 8 element Telrex, good  
 condition, \$7.00  
 144 Mc. 8 element Telrex, fair  
 condition, \$4.00

CONTACT: Harry Stein, W3CL  
 2087 Parkdale Ave.  
 TU 7-5052 Glenside, Pa. 19038

THE PREZ SEZ

CONTINUED FROM PAGE 1

Last, but not forgotten, the most important activity I think that keeps us on our toes and a close-knit Club is our "Monday Nite Nets". The dedication of the operators of these nets is "beautiful". On 2 meters is Joe, W2EIF, 6 meters is Harry, W3CL, on 220 is Doc, K3GAS, on 432 is Bert, K3IUU and on our new net on 1296 is Tony, K1SFF/3. Whether there are storms, rain, hail or what have you, these nets are always there on the air to give the latest announcements and happenings, not only of our Club but of other nearby Clubs. The friendliness of the net operators is wonderful and the Club thanks you!

The club meetings are the real backbone of the Pack Rats having a little of everything. The Italian Raffle by Mario, K3UJD is a program in itself. The silent action in the back of the room with Doc, K3GAS in charge, and a Great Main Program at every meeting. This year's program chairman is our Vice-President, Walt, K3BPP. After all this and our business meeting we have our coffee and buns, right at the meeting hall. Here another great event takes place, we all talk and communicate with each other.

I believe that all of these things together makes us a good Club, a family!

W3CJU, Don

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THE SENGUOUS RAT

Pack Rats make lousy house pets. There are some people that must have them around for various reasons. Women especially are likely to have a passion for wanting to keep a Pack Rat in the house. Some reasons include income (in general they do make good money), security (they make lousy watchdogs), and for their ability to do heavy work around the house (they are usually strong and bright). These reasons are not always enough to warrent the psychological and emotional expense involved. Let's look into a typical case.

A Pack Rat is of the Ham species, this is characterized by his interest in Amateur Radio. The extent of his unsuitability to a normal household environment is directly proportional to the amount of interest in Amateur Radio. A Ham who becomes a Pack Rat is generally very interested in his hobby and it is safe to assume that he can be classified in the group of Hams that rats in the ninty percentile of activity. This means that he will try to participate in all of the affairs directly related to Ham Radio. This includes affairs of clubs other than his own; some examples are hamfests, picnics, meetings, auctions, and semi-formal dinners (with speakers). Invariably all of these affairs are held on weekends or evenings with the most concentrated time in the spring, summer, and autumn, of the year. On those occasions the Pack Rat is useless as a household helper. As a

CONTINUED ON PAGE 7

SIMPLIFIED T-PAD DESIGN  
 REPORTED BY RON WHITSEL, WA3AXV

With the increasing popularity of SSB on the VHF bands and the greater availability of high power VHF tetrodes, many amateurs are confronted with the problem of mating low power SSB exciters with high power linear amplifiers. One of the first difficulties encountered is usually an excessive amount of power being generated by the exciter. To successfully operate a tetrode linear amplifier in the AB<sub>1</sub> mode one needs only enough power to overcome normal circuit losses. This usually means one of two options: The first choice is to lower the output of the exciter by some internal circuit modification. The second, and sometimes the most desirable, is to attenuate the output of the exciter and still maintain the proper load impedance. The T-PAD attenuator fulfills the second choice.

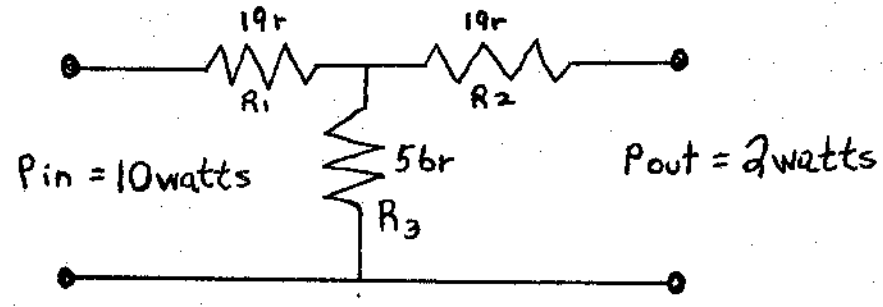
In order to simplify the design of a T-PAD attenuator all the necessary calculations have been performed and presented in tabular form. One must keep in mind that the following discussion is valid only for a symmetrical attenuator with a 50 Ohm impedance at both ends. Since this is the configuration most used by radio amateurs, it should cover the majority of reader needs. The general form of the equations used is also given for those who have special requirements. I have tried to put all the necessary information needed to design a T-PAD on the single sheet of paper which may be saved for future reference. (REFER TO PAGE )

At this point, I think an example using actual numbers is the best method to explain the use of the table. Suppose we have an exciter known to deliver 10 watts output. This being too much power to drive our amplifier we must reduce its output to about 2 watts. The following is the procedure suggested to design a T-PAD attenuator that will meet the requirements of the example.

The first step is to determine the ratio of power needed to the power available. In this case it is

$$N = \frac{P_{out}}{P_{in}} = \frac{2}{10} = .2$$

Using this number as an example we locate .2 in the left-hand column of the table. Reading to the right gives the attenuation in decibels and the resistor values required for the construction of the T-PAD. In this example, the values for R<sub>1,2</sub> and R<sub>3</sub> are about 19r and 56r, respectively. Using these values the T-PAD will look as shown below:



SIMPLIFIED T-PAD DESIGN  
CONTINUED FROM PAGE

Another consideration that must be given in the design is the power that must be dissipated by each of the resistors. The simple relationships shown below were derived from more complicated equations which are not shown. However, the reader is encouraged to derive the equations to perhaps satisfy his own curiosity as to how they come about.

- N = Pout/Pin
  - PR<sub>1</sub> = Power dissipated by R<sub>1</sub>
  - PR<sub>2</sub> = Power dissipated by R<sub>2</sub>
  - PR<sub>3</sub> = Power dissipated by R<sub>3</sub>
1. PR<sub>1</sub> = Pin (R<sub>1</sub>/50)
  2. PR<sub>2</sub> = PR<sub>1</sub> (N)
  3. PR<sub>3</sub> = Pin - (Pout + PR<sub>1</sub> + PR<sub>2</sub>)

This should give the reader all the information he needs to design a T-PAD attenuator for use in amateur applications. The reader is cautioned against using other than ordinary carbon resistors for the T-PAD unless he is absolutely sure of the properties of the resistors he may have available (i.e., non-inductive at the frequency of operation). Various series-parallel combinations of carbon resistors will generally suffice to build up suitable power tolerance for use with most VHF excitors.

I hope this article will save some time for those of us who have occasional need to construct an attenuator network in the process of "improving" our amateur stations. (CHART LOCATED ON PAGE 8 )

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THE SENSUOUS RAT CONTINUED FROM PAGE 5

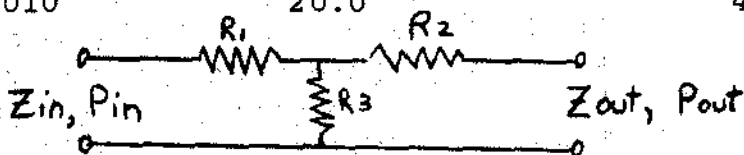
matter of record, these affairs will most often require the time and effort of other household personnel. The most devastating of affairs are auctions, hamfests, and flea markets. These three offer the disadvantage of enabling the Pack Rat to acquire more equipment to work on therefore cutting into available household time. All in all, you can count on at least three lost weekends during the May to October period due to these affairs.

Also during this ideal housework period, falls the June QSO party. This will require a complete weekend in itself, Friday thru Sunday night. During this period he can be reached only via Ham Radio, and then only long enough to gain a point for the club. Sometimes, this weekend's activities reaches into the middle of the following week, especially if he donates his own

SYMMETRICAL T-PAD ATTENUATOR  
BY RON WHITSEL, WA3AXV

$$Z=Z \text{ (IN)} = Z \text{ (OUT)} = 500\text{OHMS}$$

$\frac{P \text{ (OUT)}}{P \text{ (IN)}}$ (N)	ATTENUATION (DB)	SERIES ARM R1 . R2 (OHMS)	SHUNT ARM R3 (OHMS)
.950	.2	.64	1949.35
.900	.4	1.31	948.68
.850	.7	2.03	614.63
.800	.9	2.78	447.21
.750	1.2	3.58	346.41
.700	1.5	4.44	278.88
.650	1.8	5.36	230.35
.600	2.2	6.35	193.64
.550	2.5	7.41	164.80
.500	3.0	8.57	141.42
.450	3.4	9.85	121.96
.400	3.9	11.25	105.40
.350	4.5	12.82	91.01
.300	5.2	14.61	78.24
.250	6.0	16.66	66.66
.200	6.9	19.09	55.90
.150	8.2	22.08	45.56
.100	10.0	25.97	35.13
.095	10.2	26.43	34.05
.090	10.4	26.92	32.96
.085	10.7	27.42	31.86
.080	10.9	27.95	30.74
.075	11.2	28.50	29.60
.070	11.5	29.07	28.44
.065	11.8	29.68	27.26
.060	12.2	30.32	26.05
.055	12.5	31.00	24.81
.050	13.0	31.72	23.53
.045	13.4	32.49	22.21
.040	13.9	33.33	20.83
.035	14.5	34.24	19.38
.030	15.2	35.23	17.85
.025	16.0	36.34	16.21
.020	16.9	37.61	14.43
.015	18.2	39.08	12.43
.010	20.0	40.90	10.10



$$P(R1) = P(IN)R1/50$$

$$P(R2) = P(R1)N$$

$$P(R3) = P(IN) - (P(OUT) + P(R1) + P(R2))$$

$$N = P(OUT) / P(IN)$$

$$R1 = R2 = Z \left[ \frac{(\sqrt{N} - 1)}{(\sqrt{N} + 1)} \right]$$

$$R3 = 2Z \sqrt{N} / (N - 1)$$



equipment to the cause.

While on this period, there is a picnic in August that is an advantage because he is expected to bring his whole family for a day in the park. Also, on the advantage side is a dinner dance usually held in May. Although a baby sitter is necessary, the affair is usually quite pleasant and enjoyable with no extra work to the household (there are several exceptions where the Pack Rat's household is completely upset in planning for this event). A third bonus is the club meeting in August, where the wives are invited for an evening of outdoor fun. The only inconvenience is to the household where the outing is held.

Although it may seem to be a bonus, the three advantages are there to heal the wounds of the previous occasions that led to the unsuitability of a household Pack Rat. In exchange for the one meeting where all are invited, the Pack Rat will attend eleven more by himself, one each month. For the dinner dance you will lose the Pack Rat for one whole weekend in January, usually the one following New Year's Eve, the January contest. This contest requires that you lose him not because he will not be home, but because he will chase everyone else out of the house so that he will not be disturbed. The picnic is not designed to make up for anything in particular, however, it is left to the individual Rat to plan something for which the picnic will soothe strained relations. A few of the possibilities are the transmitter hunts, usually one a month held on Sundays for three to four hours, a large number of hamfests held on weekends, normally several hours drive away, or possibly an outing to some place such as North Carolina to try to break a record that you did not know existed. This little gem takes a weekend plus.

In each case above, the Pack Rat will take the family car in addition to himself, leaving you without means to go anywhere. He will normally take more money than normal when he goes to an affair where there will be things that he can buy (almost everywhere). And if he is a builder, watch out, for then he may haunt surplus houses for bargains with which he will clutter up the house. The ideal surplus day is Saturday, and if he is looking for something in particular, he may search for weeks.

As you can see, the disadvantages far outweigh the advantages. The sad thing, though, is that once attached to a Pack Rat, a household will very rarely attempt to dispose of him. The reasons behind this is not within the scope of this article, however, each household could come up with many such reasons. The only advice one could give to a Pack Rat household is to have everyone take part by at least joining the same species (that of the Ham) and eventually (where the rules permit) become a Pack Rat also. For those that are not eligible to become Pack Rats, there are several other clubs in the area to investigate.

A RAT

THE BOOK RACK  
de Paul R. Behrmann, K3WEU/AREA\*

Title: HOW TO USE TEST INSTRUMENTS IN ELECTRONICS SERVICING  
Author: Fred Schunaman  
Price: \$7.95 hardbound; \$4.95 paperbound  
Publisher: TAB Books No. 485  
256 pages. Over 200 illustrations. 12 Chapters.

Here is a long-needed, practical handbook on test equipment applications - ranging from the use of audio gear to tube and transistor checkers... just what is needed to put unused equipment to work. Not just a series of "how-it-works" descriptions, but a "how-to" manual describing specific tests and troubleshooting techniques for the electronic technician, drawn from the many years' experience of an old pro - Fred Schunaman, former editor of "Radio-Electronics".

In the first two Chapters are new ways to use the scope in TV troubleshooting and how to interpret what is seen. The next two Chapters present several new "tricks" that can be done with multimeters - VOMS, VTVMs, FET VOMs, etc. - how to derive meaning from voltage and current readings and the use of the ever-faithful ohmmeter. Signal generators are covered in Chapter 5 - signal-injection troubleshooting, alignment techniques in troubleshooting, and how to measure inductance and capacitance with the help of the signal generator. Also included are special generator types such as the grid-dipper.

Color TV test gear is examined in Chapter 7, revealing a number of pointer and pitfalls facing the technician as he attempts to put markers, sweeps, and pattern generators to work. With the help of such equipment the author suggests shortcuts and special techniques in color demodulator adjustment receiver setup, purity, color temperature, convergence, and troubleshooting. For the audio "bug" there's an entire Chapter on audio tests with audio/square-wave generators, audio voltmeters, intermodulation analyzers, harmonic distortion meters, and FM stereo equipment.

Chapter 8 describes additional ways of checking capacitors with simple tests and with a bridge. Test probes are considered in Chapter 9, and Chapter 10 covers tube and transistor checkers, CRT testers and rejuvenators, cathode current measurements, and field-strength measurements.

An entire Chapter is devoted to signal tracing, along with impedance and frequency measurements. And the last Chapter tells how to calibrate and maintain test equipment. There's also an appendix listing preferred resistor values, volts-to-watts conversion data, decibel tables, etc., plus a glossary of terms.

CONTENTS: The Oscilloscope-Servicing With the Oscilloscope -The Multimeter Servicing With the Multimeter-Signal Generator Uses-Color Generators & Receiver Tests-Audio Servicing-Using Capacitor Checkers-Probe Applications Tube, Transistor, and other Checkers-Signal Tracing -Maintaining Test Instruments.

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# MT. AIRY V.H.F. RADIO CLUB, INC.

PHILADELPHIA, PENNSYLVANIA

CLUB MEMORIAL CALL

W3CCX

PACK RATS FREQUENCIES  
145.2 - 50.2 - 221.4 - 432.3 Mcs.

ADDRESS CORRESPONDENCE TO:

2087 Parkdale Avenue  
Glenside, Penna. 19038

23 June 1971

From: Mt. Airy VHF Radio Club, Inc.,  
Philadelphia, Pennsylvania  
To: Federal Communications Commission,  
Washington, D. C. 20554

Subj: Establishment of Citizen Band Service and Hobby Class Amateur  
License in the 220 MHz Amateur Band; opposition to

Ref: (a) RM 1633  
(b) RM 1656  
(c) RM 1747

1. Reference (a) proposes to establish a hobby class amateur radio license within the present 220 MHz amateur band. Reference (b) proposes to move the Citizens Band operation from its present assignment in the 27 MHz band to the VHF, specifically 220 MHz. Reference (c) proposes to establish a new Class E Citizen Band Radio Service in the 220-222 MHz band of frequencies. The Mt. Airy VHF Radio Club, Inc. wishes to go on record as not being in favor of any of the subject Rule Making Proposals.

2. The band of frequencies between 220 MHz and 225 MHz is a shared assignment allocated to amateur radio and radiolocation devices in Region 2 under the international Radio Regulations. Amateur radio operation has been compatible with the radiolocation devices probably due to the scattered type of operation typical of amateur radio. Permitting the type of operation proposed in reference (a), (b), and (c) could conceivably create interference with many "safety-of-flight" radiolocation devices.

3. This band of frequencies is assigned for R.A.C.E.S. operation and the established Civil Defense nets throughout the United States will be displaced with no place to re-establish.

4. The establishment of a Citizen Band Class E Service or a Hobby Class amateur type operation will create a new intolerable policing problem for the Federal Communication Commission presently understaffed monitoring and policing facilities and personnel. The illegal and unauthorized type of operation now rampant in the present 27 MHz Citizen Band assignment will be transferred to the 220 MHz assignment.

5. There is presently a Citizen Band assignment in the 460 - 470 MHz frequency range for Class A - Class B stations. It is obvious that the lack of activity in this assignment is economic since the manufactures of equipment have not seen fit to manufacture and sell radio sets to operate in this frequency range. Before they propose to usurp frequencies assigned to another service as in Reference (c), they should explore their technical capabilities and make use of frequencies already assigned.

6. The occupancy of the 220 MHz band by the amateur service is fairly high. In the Philadelphia area there are approximately 50 to 60 amateur stations operating regularly. It is known that there is other activity of comparable numbers throughout the United States particularly around the urban areas.

7. It is for the reasons stated in the above paragraphs that the Mt. Airy VHF Radio Club, Inc. of Philadelphia, Penna. has opposition to the Rule Making Proposals of References (a), (b), and (c). The Mt. Airy VHF Radio Club, Inc. has a membership of 97 all licensed by the Federal Communication Commission.

8. The undersigned were appointed as a committee for the purpose of investigating and studying References (a), (b), and (c) and recommending a policy to the club. It was the unanimous decision of the club that it be recommended to the Commission that no action be taken on References (a), (b), and (c).

For the Mt. Airy VHF Radio Club, Inc.

*Harry B. Stein*  
HARRY B. STEIN, W3CL

*John B. Power*  
JOHN B. POWER, W2AXU

Copy to:  
Donald Hampton, W3CJU  
Pres., Mt. Airy VHF Radio Club

Harry A. McConaghy, W3EPC  
Director, Atlantic Division, ARRL

Robert M. Booth, Jr., W3PS  
General Council, ARRL

John Huntoon, W1RW  
General Manager, ARRL

CALENDAR OF COMING EVENTS

Syllabus by Lee, K3MXM

- August 8      PACK RAT PICNIC - Fort Washington State Park,  
Flourtown, Pa.  
ALL DAY - Events and Contests throughout the period.  
Make your plans for a full day of fun and pleasure  
in the sun. Tables and fireplaces available. Door  
prizes and surprises for all especially the harmonics.  
Two talk in frequencies will be operating 50.2 and  
145.2. Signs will be posted at important intersections.  
Each year the picnic gets better and better and this  
year will be the best yet.  
Two Dollars per family payable at the door.
- August 11     Board of Directors Meeting - QTH - W3CJU  
Directors and interested parties invited.
- August 18     Outdoor Meeting at QTH - K3IUUV, Bert and Harriett  
Soltoff, 961 Warfield Lane, Huntingdon Valley, Pa.  
Movie and slide Nite - see all those pictures that  
have been taken by our alert roving photographers  
throughout the year, at the various activities. Speical  
running commentary by our own W3CL.  
XYL's are especially invited as this is a special social  
nite for all.
- September  
15             Pack Rat Auction - QTH - W3ZD, Dave Zimmerman. A  
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and don't forget bring equipment to sell. Two golden  
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HAMFEST DATES

- August 1      Shennandoah Valley ARC Hamfest - Winchester, Virginia
- August 15     Knight Raiders VHF Hamfest - Westbrook Park, West Milford,  
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- September 12 : South Jersey Radio Club - Malaga, New Jersey
- October 24    Gaithersburg, Maryland.



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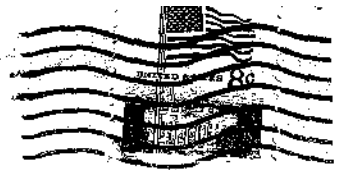
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