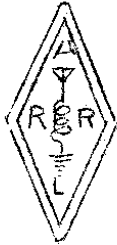


# PACK RATS' CHEESE BITS



MT. AIRY V.H.F. RADIO CLUB, INC., PHILA., PA.  
 (50.2, 143.2, 221.4, 432.3, & 1296.4 MC.)  
 CLUB CALL: W3CCX  
 AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE  
 EDITOR: HELEN BRICK, XYL, W3SAO  
 MEMBER CLUB: DELAWARE VALLEY COUNCIL OF AMATEUR RADIO CLUBS  
 MEETING NOTICES: LAST PAGE



VOLUME VIII MAY 1965

## OUR PREZ SEZ

NUMBER 2



MAY 1965

### DON'T FORGET: NOMINATION OF OFFICERS - 1965-1966 - MAY 19th MEETING!

Those of you who missed Ladies' Nite, April 10, have something to be sorry for. Not only was there a large turnout of people (144), but the food was excellent and the magician, Bob Little, was very entertaining. Many thanks to K3HWZ, Grandpop Bill and W3CU Harry, for another job well done. Also a big thank you to K3WEU, Paul, for the ladies gifts.

The last issue of Cheese Bits contained many articles by our own members. This makes the best type of club paper, contributions by our own people. Keep it up. Anyone can contribute anything that may be of interest to your fellow members.

Again, there are complaints that the Pack Rats are not populating the bands except during contests and shortly thereafter. How about rectifying the situation and call CQ occasionally. Openings can be expected soon, so practice your techniques by getting on the air NOW, NOW, NOW, NOW!!!

By the time you receive this issue, there will be only a month before the June QSO party. W2EIF, Jo Kilgore, chairman of this happy event, informs me that everything is in GO condition and he is looking forward to a most enjoyable weekend.

Don't forget to put your needs in the Swap & Shoppe column run by W3ZRR, Ray. Personally, I sold something and picked up something from last issue's column. Everyone is welcome to insert an ad but, as I said before, no junk.

Make plans to attend our picnic in August. This year's affair promises to be better than ever. W3SAO is our able chairman and his sidekick, Mother Rat, will do her usual good job in co-ordinating the entire program. We Pack Rats are mighty lucky in having such hard workers in our group.

Don't forget that our Technical Committee is available for help. Contact K3IUV.

73, Doc

\*\*\*\*\*  
 ARRL DIRECTOR, ATLANTIC DIVISION, W3YA, Gilbert Crosslèy, 734 W. Foster Ave., State College, Pa. 16801. RE: ARRL Bulletin NR. 1000 page 2.  
 \*\*\*\*\*

Open this issue at Random, read the first line your eye catches. If you feel it is not interesting close it immediately, put it on the shelf and rush to your psychiatrist to have an "eyeball QSO". Hi. from "SIRAN", Bangalore, India.

CHEESE BITS IS PUBLISHED MONTHLY BY  
MT. AIRY V.H.F. RADIO CLUB, INC.,  
PHILADELPHIA, PENNSYLVANIA.

10¢ a copy \$1.00 a year

WE OPERATE ON AN EXCHANGE BASIS WITH  
OTHER PUBLICATIONS AND ANYTHING THAT  
IS PRINTED IN CHEESE BITS MAY BE RE-  
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LICATION AS LONG AS PROPER CREDIT IS  
GIVEN.

DEADLINE FOR ARTICLES: 20th of the  
month.

ALL INFORMATION SHOULD BE SENT TO THE  
EDITOR: HELEN BRICK, ARNS  
821 W. Lindley Avenue,  
Phila., Pa. 19141  
215- DA. 4-7524

PUBLISHER & SUBSCRIPTION MANAGER:  
K3GAS, DOC CUTLER  
7815 New Second Street,  
Phila., Pa. 19117  
215- ME. 5-1070

TRUSTEE OF CLUB CALL: W3CCX  
W3GAD, FRANCIS BRICK  
821 W. Lindley Avenue,  
Phila., Pa. 19141  
215- DA. 4-7524

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 NITE NETS:

7:30 P.M. - 145.2  
8:30 P.M. - 50.2  
9:30 P.M. - 221.4  
10:30 P.M. - 432.3

OFFICERS: 1964 - 1965

PRESIDENT: K3GAS, DOC CUTLER  
VICE-PRES: W2EIF, JOSEPH KILGORE  
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W3HKZ, EDWARD KUSHNER  
W3LHF, DAVID ZIMMERMAN  
W2AXU, JOHN POWER  
K3CIV, RALPH HERSH  
(EX-OFFICIO)

\*\*\*\*\*

MAY BIRTHDAYS

K3KVS, Jerry; W3ADF, Deac; W3KLL,  
Walt; K3GAY, Don; K3ZPN, Lloyd and  
W3JSD, John.

Congratulations, and may God grant  
you life to enjoy many more.

\*\*\*\*\*

PHILA., CO. AREC

REGULAR MEETING: Wednesday, May 5,  
8:00 P.M.

PLANNING MEETING: Wednesday, May 26,  
8:00 P.M.

MEETING PLACE: Gilbert Spruence School  
Herrocks & Levick Streets.

W3ELI, George Van Dyke, Sec., E. Pa. (2)

ARRL BULLETINS

NR. 998 March 25, 1965

Bolivia and the United States have  
agreed to permit reciprocal operating  
by amateurs of one country while in  
the territory of the other, effective  
April 14. The U.S. has previously  
signed similar agreements with Costa  
Rica and the Dominican Republic, and  
has long had a separate treaty of sim-  
ilar purpose with Canada. Other agree-  
ments are being negotiated. The Post-  
master General of the United Kingdom  
recently announced his willingness to  
permit U.K. operation by amateurs of  
other countries on a reciprocal basis.  
Further agreements will be announced  
by bulletin as information becomes  
available. AR

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NR. 999 March 31, 1965

This much discussed, and cussed, bul-  
letin I will not reprint. Each and  
every member has received, or should  
have, by now a complete copy of the  
FCC Docket. READ it, STUDY it, and  
then get off your hands and write.  
Don't just sit back and cry, "They  
can't do that!" Remember, the CBers  
uttered the same cry only to learn  
that the FCC could do it, and did it!  
YOU write, and don't "LET GEORGE DO IT!"

\*\*\*\*\*

NR. 1000 April 8, 1965

In their notice of Proposed Rule Making  
the FCC explained at length the need  
for an incentive license structure  
which would encourage amateurs to in-  
crease their technical knowledge and  
operating skills. Incentives are pro-  
posed by reserving certain portions of  
the 80, 40, 20 and 15 meter c.w. and  
phone bands for the two highest class-  
es, Extra and a new First Class, and  
by the use of call signs which would  
identify the class of license of the  
operator. A new First Class license  
is proposed requiring one year experi-  
ence plus 16 w.p.m. code and a written  
examination between General and Extra  
in difficulty, and two letter calls  
might be available under certain cir-  
cumstances. In addition, FCC proposes  
that Novices have a two year license  
term and retain present privileges ex-  
cept no two meter voice operation.  
The notice invited constructive com-  
ments and suggestions by July 15. The  
League's Executive Committee has re-  
viewed the proposal and, in recognition  
of the importance of his call sign to  
most amateurs, has requested Headquar-  
ters to study possible revisions to  
minimize the possibility of drastic  
call sign changes and other hardships.  
The complete notice has been sent to  
all affiliated clubs and will be pub-  
lished in May QST. All amateurs are  
urged to withhold judgement until they  
have read and studied the notice and  
then to submit their suggestions to  
their Directors prior to the annual  
board meeting to be held on May 21.

AR

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MAY 15, 1956

HAPPY BIRTHDAY - PACK RATS

MAY 15, 1965

Another year has rolled around and Mt. Airy V.H.F. Radio Club, Inc. enters its 10th year. Nine years lie behind, years of growth and fellowship and accomplishment. Times of agreement and disagreement, the healthy backbone of any organization. Times of great joy and times of sorrow. The times of joy at Ladies' Nite, V.H.F. QSO Parties, Family Day Picnic, trip to the new ARRL Headquarters, visits to other clubs, and, of course, coming out on top in the VHF January Sweepstakes.

Times of sorrow with the passing of our fellow members, W3CCX, Matt Gelardi, K3MTL, Court Manning, W3ASD, Carl Vincent and W3AYG, John Harris.

The club in years is only a baby, but in spirit it is a giant. Why? Because the members are not looking for individual honors, but are banded together in one interest; helping each other and the public in time of emergency.

Not all of the members are strictly V.H.F., but the prime interest is V.H.F., therefore the members have a common bond.

A number of the members work silently in preparing prospective hams for the FCC exams so as to get their license. We learn these facts from those they have helped.

From a small beginning of 11 members, 8 of whom are still members, we have grown to 90 members, 20 Retired members and 2 Student members.

About 30 members are active in AREG, and RACES, or both.

Among the membership we have five ARRL Appointees; W3ELI, George Van Dyke, SEC E. Pa.; W3SAD, Francis Brick, V.H.F. PAM; K3WEU, Paul Behrmann, OBS and W2EIF, Joseph Kilgore, K3EMA, Peter DeConter, OO's.

The club was organized in May of 1956 and starting in August of 1956 has held a "Family Day" picnic every year on the second Sunday at Fort Washington State Park, Flourtown, Pa. From a group of 100, at the first one, the attendance has grown to over 700, with many clubs attending in a group.

We became incorporated in April of 1958 and also in April of 1958 "Cheese Bits" first appeared. Through the years "Cheese Bits" has grown, not only in size, but also in circulation. It now goes to many states, Canada, India and the Antarctica.

There is no need to point out that the Pack Rats are active in the January V.H.F. Sweepstakes, our record speaks for itself. You would be surprised at the number of hams who think we are two different clubs. They cannot understand why the Pack Rats score does not appear in QST. It is then that we must explain that Mt. Airy V.H.F. Radio Club is our "Sunday-go-to-meeting" name.

How did we get the name of "Pack Rats"? In the early beginnings, before any organized nets, they would get on the air and "horse" around. A fellow in Jersey said, "You guys sound like a bunch of pack rats.", and the name stuck. A pack rat, as you know, takes things, but also leaves something in return. Such is the character of the Pack Rats; They take, but also give in return.

We have just held our 8th Ladies' Nite, April 10th. Actually it was the 9th. The first one was held on a meeting night at the old meeting place, Chelton Hills Recreation Center. That was really a Ladies' Nite. The ladies donated the food, and the OM's supplied the entertainment. The XYL's of the officers conducted the meeting, and the Rats had to shut-up as we overruled all of their objections.

In 1963 we presented the League with a model of the new headquarters, which is on display in the lobby for all visitors to see, plus \$1000 towards the Building Fund, which was made possible through the joint contributions of clubs and individuals in the Atlantic Division.

From one Monday Nite Net in 1956, 144.2 Mc/s we have sprouted to four, 145.2, 50.2, 221.4 and our newest net, 432.3 Mc/s.

The nets, as our meetings, are open to all who wish to join us. We have only one closed meeting, and that is in December. We feel sure that the reason for the one closed meeting is quite obvious.

The Pack Rats have been a member of the Delaware Valley Council of Amateur Radio Clubs since its inception.

That is just a short history of the Pack Rats. To go into detail would take several pages.

Congratulations, sons, and may you continue to grow in stature.

88, Mother Rat.

\*\*\*\*\*  
The "Founding Father" of Mt. Airy, W3IBH, Charlie Clements is at present in room 248, Chestnut Hill Hospital, Phila., Pa. 19118, recovering from a heart attack. He may be home by the time you read this, so send the cards to his home; 6653 Crowson St., Phila., Pa. 19119.

By W3MFY, Preston Funk

Sometimes severe installation and duty requirements are placed upon antenna rotors by amateur antenna arrays. The factors involved in such installations have been under investigation at the request of the Alliance Mfg. Co. to determine the effect of such requirements on antenna rotors.

It is found, from examinations conducted, that the most severe duty requirements are met with vertically polarized arrays, and that certain T.V. type antenna rotors may be used for such installations, provided that proper attention is paid to the installation factors involved. This investigation is directed toward the type of installation in which the rotor is to be mounted at the top of the mast and external to the mast proper, so that the rotator itself must be capable of meeting the wind loading problems involved. The antenna is assumed to be mounted to the rotator as directed for T.V. antennas. Under these circumstances, the suitability of the rotator for the purpose is directly related to its ability to withstand wind loading placed upon it due to wind pressure against the antenna itself.

The pressure developed against an antenna surface runs approximately in accordance with the following formula:  $P = C V^2$ . Where P is pressure in pounds

per square foot of projected area, C is co-efficient dependent on the shape of the surface involved equal to 0.0025 for the cylindrical surfaces and 0.0024 for flat surfaces.  $V_a$  is the absolute velocity as reported since 1932 by the weather bureau, not to be confused with cup and anemometer data used prior to that time.

It can be seen from the above that for conventional antennas made of tubular metal, the formula  $P = 0.0025 V_a$  lbs per square foot, accurately reflects the expected pressures. Calculation will show this to equal 20.3 lbs per square foot of projected area at 110 miles per hour. These are very substantial figures when it is recognized that antennas of the order of 10 Sq. feet are used in multi-element beam antennas. Some knowledge of the presence of wind levels reached in the United States is of importance in determining the significance of these factors in picking design values for use in this field.

The U.S. weather bureau furnishes fastest mile velocity figures from various recording stations around the U.S., except from mountaintop and hurricane locations. Highest fastest mile recorded velocities vary from 62 MPH at Washington, D.C. to 92 MPH at Minneapolis, Minn. Fastest mile velocities in hurricanes on land, along the sea coast, have been recorded at 110 MPH at Cape Hatteras, N.C., 114 MPH at Pensacola, Fla, and 132 MPH at Miami, Fla. Mount Washington, N.H. has recorded fastest mile velocities of 188 MPH. Measurements have been made of the relationship of gusts to the fastest mile data from the U.S. weather bureau which shows the gusting exceeds fastest mile data generally by 30%. As a result of the above, the electronic industry association (EIA) has recommended a wind loading standard of 30% of projected surface for the purpose of design by U.S. manufacturers. This corresponds to a velocity of 110 MPH when calculated in accordance with the above formula. This seems generally in agreement with the above data and the use of such a procedure will consistently yield designs able to withstand successfully most wind conditions.

In the case of antenna towers, and rotators, the loading is determined by the type of antenna system which is mounted on the top of the tower or rotator. The following types of antennas are representative of the extreme load conditions used by amateur radio operators. An examination of these load conditions in detail will prove worthwhile, since the data developed leads to the conclusion that masts and rotators developed to meet these loading requirements will withstand installation conditions sufficiently severe to include in excess of 95% of the commercial antennas now purchased by amateur operators. The investigation of these matters has been conducted under the assumption that the antennas will remain rigid during the winds involved, so that the projected area will remain constant. Not all antennas of these sizes are constructed of tubing of sufficient strength to withstand winds of 110 MPH. Rotators and tower to be within EIA objectives should, however, meet these aims so that they may support effectively, antennas which are properly designed. It is possible to mount the Mosley TA 36 antenna with its boom center not more than 1' above the center of the rotator. Since this antenna is well balanced physically and horizontally polarized, the major problem in high winds becomes one of the bending moment applied to the rotator. The projected area of this antenna is 10.7 Sq. Ft. At EIA wind loading of 30 lbs per Sq. Ft., a force of 321 lbs is applied to this antenna horizontally and at a height of one foot above the rotator bearings becomes 321 lbs per foot. This figure is representative of tri-band antennas.

Apparatus was then constructed to permit dead weight bending moment tests to be run. These tests show that the most widely used design of T.V. type rotators withstand bending moments of 776 lb. feet equal to the values reached by all of the above antenna structures which can be mounted with their booms

(next page)

WIND LOAD (cont'd)

not more than one foot above the rotator and that when equipt with a bending moment bracket, these same designs are capable of meeting the bending moment requirements of all of the above arrays. These rotators feature a closely coupled through-mast construction permitting the use of a bending moment support bracket where required for more extreme loading and are capable of supporting in the horizontal winds involved antenna structures not capable of being supported by leading rotators featured for amateur use:

Specific antennas have been selected here for illustrative purposes only:

NAME	MODEL	LBS WGT.	SQ. FT. AREA	WIND LOAD #	MPH WIND VELOCITY
MOSLEY	TA 36	69	10.7	210.1	90
	TA 33	40	6.8	114	90
	TA 33 Jr.	20	5.4	86	90
	TA 20-40	113	23.6	405	90
HY-GAIN	THUNDER BIRD JR.	26	6.8	114	80
	OLD BANDER	54	6.9	117	90
	Th 6	19	5.2	85.9	100
	Th 2	29	6.2	79	100
TELREX	3 el 20 M 313 HS	25	4.40	135	100
	3 el 20 M 317 B	48	5.92	184	100
	4 el 20 M 436	108	12.06	382	100
	5 el 20 M 536	113	13.64	432	100
	5 el 20 M 546	150	14.13	448	100
	6 el 20 M 646	176	16.84	533	100
	3 el 40 M 346	177	13.50	427	100

The xmas trees by Telrex show custom towers are necessary, so obviously such arrays are not relevant:

Summary:

The greatest wind loads occur on vertically polarized arrays. (Note: put them up right and they will stay there and rotate)

Figures on other makes of antennas were not available at this time.

K.U.I.

By W3HKZ, Edward Kushner

Early Bird, the world's first commercial communications satellite capable of handling TV, went up on April 6th. It is an 85 pound, hat-box shaped unit in a stationary orbit 22,300 miles high, over the equator at Long. 27.5 degrees W. This is over the Atlantic ocean, between the east coast of Brazil in South America and Gabon, on the west coast of Africa.

It can handle two way TV; it carries duplicate transceivers and the IF of each is 25 mc. Its TV channels are 2.5 mc wide. This is similar to the capacity of early coaxial cables which provided satisfactory pictures for cross-country TV. Although FCC standards call for each TV channel to be 6 mc wide, the channel has audio, guard bands and a portion of a side band which causes the video channel to be 4.5 mc wide. Although expensive, "high fidelity" receivers can receive 4.5 mc bandwidth, most TV sets made today receive much less than this.

The satellite was built by Hughes Aircraft Co., which also built the Syncoms of last year and which it resembles. The Early-Bird is spin stabilized, 28.4 inches in diameter and 23.25 inches high. The life is estimated at 1 1/2 to 4 years, but it is hoped it will last twice that period.

Its outer surface is covered with 6,000 silicon-coated solar cells which feed two 21-cell nickel-cadmium batteries and voltage regulators. Using the sun's rays for energy, the solar cells supply about 45 watts to the batteries. In its synchronous orbit, Early Bird will be in full sunlight most of its life; however, for 70 minutes each time it is in earth's shadow during the semi-annual eclipse periods (vernal and autumnal equinoxes), electrical power for the communications systems aboard will be supplied by the batteries.

The system contains two transceivers. Signals from the ground will be received by a single receiver which will feed into one of the two transmitters, each transmitter has an output of 6 watts.

The colinear slot dipoles, which are used for both transmitting and receiving, have a gain of 9 db. The transmitting beam is conical, about 11 degrees wide, with a maximum gain in the direction of the ground. The 6,000 mc band is used for transmission up to the satellite; the 4,000 mc band for transmission from the satellite down to earth. It provides for 240 two-way telephone circuits or two-way TV signals.

(next page)

EARLY BIRD (cont'd)

The only ground station in the U.S. is at Andover, Maine. Ground stations in other countries are owned by their respective governments. Installations at present are: Goonhilly Down, Britain - Pleumeur-Bodou, France - Raisting, West Germany - Fucino, Italy - Grignon, Spain and Tokyo, Japan. A Canadian station is being built at Mill Village, Nova Scotia. The Early Bird cost 3 million and it took 3.5 millions of dollars to put it up in the sky.

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# Official Notice

## NOMINATION OF OFFICERS

ARTICLE V, SECTION 1) of the Constitution reads:

A nominating meeting shall be held at the first regular meeting in May of each year and such meeting shall be announced in writing to each member in good standing at least two weeks before the time of holding this meeting.

You are hereby notified the the business of the meeting to be held on Wednesday evening, May 19, 1965, shall be for the purpose of nominating the Officers and Directors for the year 1965 - 1966.

The nominating committee will present a suggested slate and nominations will be received from the floor.

It is of the utmost importance that YOU be present.

\*\*\*\*\*

## DID YOU KNOW

That W3ZTU, Myles, lost his antennas in the "balmy spring breezes" the other week?

That W3FLG, Mary Ott, is the head nurse at the Chestnut Hill Hospital and that she attended Pack Rats Ladies' Nite last year? Had to work this year.

That the father of W3IBH, Charlie, passed away on April 10? Belated sympathy wishes to you and your family.

That W3GXB, Bob, supplied the two meter Gonset and halo that Charlie is using in the hospital.

That W3HKZ, Ed, is the president of WCAU Amateur Radio Association?

That W3CL, Harry, is the president of the Delaware Chapter QCWA?

That W82CDP, Lou, is no longer a "private" in the ham ranks? He got his General class a short while ago.

That at this writing, K3HSS, Charlie, is sick? Speedy recovery.

That the "Rats" gave Mother Rat a set of beautiful door chimes for the new QTH on Ladies' Nite? A heartfelt thanks, boys.

That while visiting W3IBH in the hospital, April 19, upon leaving, we saw the station wagon of W3RZU, Elio in the parking lot? Hope no one in your family is there.

That the latest news on W3CFS, Ed, is that he is up and out working on his garden? 'At-a-boy, Ed, keep it up.

That K3WEL, Paul, now has his antennas restored on the roof?

That K3ESL, Ben, phone-patched W3IBH into the six meter net on April 5th? Thanks, Ben. Charlie on "band X"! What next?

That W3ELI, Van, has been appointed the Pack Rats' representative to the Delaware Valley Council of Amateur Radio Clubs?

That the following is part of a write-up appearing in "SIRAN" (South India Amateur Radio Newsreel)?

"Mt. Airy VHF Club, Inc. (W3CCX) of Philadelphia, is one of the most active group of VHF enthusiasts, who are very popular on the VHF bands. This group is known as "Pack Rats" and their monthly magazine is called "Pack Rats' Cheese Bits". Mrs. Helen Brick, XYL of OM Francis Brick, W3SAD, Trustee of that club, edits their magazine and so she is known as Mother Rat to the Pack Rats."

That W3GCR, Mike Korsnak, built a two meter clover leaf and installed it on the outside of W3IBH's hospital window? Thanks, Mike.

That Mother Rat most humbly apologizes to W3HFY, Hal, for omitting his name from the list of directors in the last few issues? Not done on purpose, Hal.

## TWO METER ACTIVITY

By W3LHF, David Zimmerman

Spring has finally turned the corner and is now upon us in force at this writing. So much so, that this column is late getting to Mother Rat due to spring fever and the coming once again of the opening of trout season. This year's gremlin was not quite as bad as last's, but again a rather odd set of circumstances cropped up to mar my opening day in quest of the finney creature. I won't bore anybody with the details, but an alarm clock that simply died, and a new set of waders that leaked like you know what entered into it. So much for that.

The most interesting thing on the band last month was "Oscar III" and the exciting transponder. Many signals were heard coming back from it on most every pass at this QTH, but no attempts at communications by club members was successful, to my knowledge. I believe the reason to be improper antennas. We must get the tilting feature into the act. In any event, the beast up and died on us after about two weeks of operation, somewhat ahead of the planned life. The chief Oscar watcher, of the club, reports the beacon worked for sometime after the demise of the repeater, and may still be working. No checks have been made.

Two meter activity on the band shows a goodly amount of new blood, and this is certainly welcome. A few of the new signals are of the hefty rock-crusher variety, and we can look forward to a bit more competition for any DX that may crop up. Maybe a bit more activity in this area will even stir up some of that New England gang.

Warmer weather is also a fine time to take care of the needed antenna repairs and to make the longer range planning for bigger arrays. I am making a few plans myself for antenna improvements that will include construction of a couple of new yagis. Anybody looking for information on construction, materials, or who might be interested in some co-operative effort, please get in touch with me. I have details on some of the better commercial antennas and some ideas on easier construction methods that may be of interest.

That's all for now, remember to check the band mightly. The DX season is here.

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Dave, could this possibly be the answer to what happened to Oscar III? It appeared in the Evening Bulletin, Wednesday, April 14. It is the semi-annually report of the Goddard Space Flight Center, Greenbelt, Md.

"The summary also showed that a U.S. satellite launched from Vandenberg Air Force Base, Calif., March 9 and previously reported as in orbit in five separate parts, now is orbiting in eight sections, four of which are transmitting radio signals. On March 30 an announcement by the Army Corps of Engineers disclosed that a Secor geodetic satellite went into orbit piggyback March 9 on the military spacecraft."

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## LATE K. U. I.

By W3HKZ, Ed Kushner

### HAMS SELDOM TO BLAME FOR TVI

The amateur radio operator is often the first to be accused in many complaints of radio of TV interference. A report issued by Britain's Post Office Engineering Dept. - the equivalent of our FCC - points out that, of 15,134 cases of interference, only 82 were caused by amateurs.

54 cases of TVI on the vhf channels were traced to amateurs while 343 complaints were caused by radiation from deflection circuits of other TV receivers. Among the other offenders were 1,585 contact devices (thermostats, switches, etc.), 824 sewing machines, 322 portable electric tools, 210 hair dryers, 149 filament type lamps and 366 neon lamps. Overhead power lines accounted for 1,237 complaints. The greatest cause of complaints (6,160) was unsatisfactory conditions at the receiving location.

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### FCC REAFFIRMS STAND ON CB ORDER

The FCC Report and Order of July 23, 1964, goes into effect April 26, the FCC announced. The Order, which aroused a storm of protest from equipment manufacturers, hobbyists, and CB users and others, had been delayed to give hearing to those who objected to it.

The document was intended to define more clearly the rules covering CB use. It limits communications between units of different stations to 7 channels out of 23 allocated. If, for example, a TV service shop has a CB license, it can communicate only between base and mobile units of the shop operating as units of the same station, or between two of the shop's mobile units in the field, but not to other CB stations, except on channels from 9 to 14 and

(next page)  
(7)

on channel 23.

Use of the station for hobby purposes or discussions of the performance of the licensee's equipment were also forbidden under the order, as well as DX, which is defined as communication over a distance of more than 150 miles.

Objectors maintained that the amendments abridged their freedom of speech, were in effect censorship and were generally not in the public interest.

The FCC considered these points and in a memo and Order dated March 1, answered each one in full in considerable detail and, in many cases, with examples to illustrate the type of communications considered under the act. All amendments to part 95, CB Radio Service, adopted by the Report and Order of July 22, 1964, are affirmed; and it is further ordered that these rules shall become effective on April 26, 1965.

From Radio Electronics - May 1965

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In reference to Ed's earlier "K.U.I." on the Early Bird we thought you might be interested in part of an article appearing in the Phila. Inquirer, April 22, 1965.

"The TV debut of the Early Bird Communications satellite, Sunday May 2, will show men at work and play on two continents. The hour-long program, to be beamed at 1 P.M. (EDT) by all three U.S. networks, the Canadian Broadcasting Corps and the European Broadcasting Union, will include a heart valve operation and five bands in intercontinental cities playing at the same time.

The heart operation is to be performed by Dr. Michael Ellis De Bakey in Houston. Dr. De Bakey, who recently operated on the Duke of Windsor, will be questioned by doctors at a conference in Geneva.

The bands will be playing the same piece in Washington, Quebec, Paris, London and Essen, Germany.

The program, which will have a potential audience estimated at 300 million, also will include exchange of news; Houston and the Chicago Cubs practicing in Houston's new domed stadium; "wanted persons" information from the FBI, Scotland Yard and the Royal Canadian Mounted Police....."

\*\*\*\*\*

The following originally appeared in the R.S.G.B. Bulletin of the Radio Society of Great Britain, and also in many swap papers.

SOLDERING ALUMINUM

Contrary to widespread opinion, aluminum may be soldered with an ordinary soldering iron and radio solder. The use of special fluxes and ultra-sonic soldering irons is not necessary for the occasional joint.

The action of the air forms a thin and invisible layer of aluminum oxide on the surface of the metal, and this must be removed before it will "tin". The area to be tinned is covered with a layer of ordinary lubricating oil (most types seem suitable, though the more viscous and less volatile are more so). Through the oil, the surface of the aluminum is scraped away with a knife, removing thin slivers of the metal and with it the oxide. The oil prevents the air from reaching the exposed metal, and if a hot, well tinned soldering iron is pressed against the cleared area, by the time the oil has boiled away the metal will be tinned.

Once tinned, it is of course no trouble to place another piece of tinned material against the aluminum and the application of heat will result in a sound, strong joint - just as good as tinplate.

Particular applications are the soldering of feed-through capacitors directly to an aluminum chassis, and the bonding of shields.

\*\*\*\*\*

Funny, but back in 1935, when "Ya Editor" worked on a production belt at Philco Radio Corporation, one of her operations was to apply a solder splash on the aluminum chassis for later application of copper braid. The way I did it was to heat the chassis first with a three pound iron, and then apply the solder. That was 30 years ago.

\*\*\*\*\*

DID YOU KNOW

That W3CFS, Ed, surprised everyone by attending the meeting on April 21? Sure was good to see him.

That "Ham" Buenger's business has grown to such proportions that he is moving to larger quarters? The new location will be; 815 Greenwood Avenue, Jenkintown, Pa. The move is still a few months away and announcement will be made when ready. Be ready to attend the "Grand Opening."



NEW PRODUCTS OF INTEREST TO HAMS

By W3NSI, Lynford Rowland, Jr.

2. 558 6 Meter Transceiver

Heathkit Co. is coming out with their SB 110 558 Transceiver for 6 Meters --available July 1965. It has the same appearance as the other Heath 558 kits and covers from 50-52 Mc in four 500 Kc segments. Other sections of the band can be covered with extra crystals. The SB 110 can be used on CW or upper and lower 558 with VOX control. No provision is made for AM. Power input is 150 watts peak to a pair of 6146 tubes. Available, less power supply but with a 100 Kc calibrator built in.

Price-- \$325

Knob-Tunable Slug Form.

James Millen Co. has a very interesting coil form which was shown at the IEEE show in March. The slug is moved within the coil form by turning the 1/4" shaft 25 times. The shaft does not move in and out, only the slug. This could be used in a VFO or Rec. Sec. unit together with a multi-turn knob such as the one used for the multi-turn potentiometers. This would be much more compact than the regular capacitor coil unit and vernier dial. The bandspread would be very good with a 25 turn knob.

Price - Coil #69100 -- \$3.39

James Millen Co. 150 Exchange St., Malden, Mass. 02148

Beam Power Twin Tetrode Tube.

AmpereX has advance data and sample quantity units available on type DX 21 twin Tetrode tube which is able to run 72 watts output on CW at 2 meters. On phone it should be able to take about 50 watts plate modulated output. The unit is about twice the size of the 5763 tube and all pins are socket connected. Socket #B8.700.86 is the same as that used with the 8458 tube from AmpereX. Fil. voltage 13.5 at .8 amps and typical operation ratings are (CW) 600 v plate at Max. current of 210 Ma. Driving power would run about 3 watts. Plate dissipation rating is 50 watts.

Price -- about \$7.50

AmpereX Co., 230 Duffy Ave., Hicksville, L.I., N.Y.

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THE PACK'S PAT

By K3PXT, Carmen Diodati

The article in last month's issue seemed to have raised some controversy as to whether it was complimentary or uncomplimentary. The truth of the matter, it was neither--just a tongue in cheek article meant for laughs and to heckle Tom. The subject matter presented were all rehashes of many enjoyable QSO's held with W3OHY, Tom, in three ways, four ways, and what not.

I must say I like and admire Tom as a friend and an amateur. I would not, nor will not, knowingly insult or make any remarks which would degrade, insult, or harm not only Tom, but any other amateur, and to go a little further, anyone for that matter. My way of life is the Golden Rule--I live by it, even though I've been hurt by its use many times.

I use only one weapon to satisfy real or imaginary hurts to my ego, pride, friendship, or person. For all practical purposes people who offend me cease to exist; I simply ignore them. Therefore, my practice is, if you can't say anything good, then saying nothing suffices.

Therefore, for the benefit of all who found the article anything but amusing, which was its only intent, my sincere apologies. If I had even considered that it would be taken any other way, I would not have written it. My apologies to all, especially to Tom and Tom's friends who cared enough to complain. I assure you all, that from here on there will not be any articles which can be misinterpreted.

73, Carmen

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K. U. I.

By W3HKZ, Ed Kushner

TO DISCOURAGE FORGETFUL BORROWERS

How about the guy that borrows your rig or test gear and never returns it until you call him three months later?

To alleviate these conditions and many others that will suggest themselves to the always resourceful ham, a laboratory has spent many months of secret research that has now culminated in the final development of a device that is not only foolproof but has survived the most rigorous of field tests under

(next page)

K.U.I. (cont'd)

All kinds of actual environment.

Although it is beyond the scope of this article to discuss the mathematical analysis of the circuit parameters, a complete discussion may be found in the 1927 edition of the ARRL handbook. We are deeply indebted also to Ohms Law for making the whole thing a reality.

The installation should be done in a professional manner, haywire procedures also work, but should not be used on the Mark 4 or 5 model since it is not our desire to start a fire.

The input is connected across the 117 volt AC line that enters the device that is being "rigged". It may either be installed before or after the AC switch depending on whether action is desired before or after the device is turned on.

At any rate, soon after application of the prescribed voltage to the input of the circuit, some sort of action can be expected depending upon the model chosen for the particular application. As usual, good engineering is required in choosing the proper model to fit the desired results. Using the following chart, a unit may be engineered for any use;

TYPE	VALUE	EFFECT	SUGGESTED APPLICATION
Mark 1	4700 ohm-1 watt	Slow, subtle, long	Long lasting irritation
Mark 2	4700 ohm-1/2 watt	Medium slow	Early return of gear
Mark 3	3100 ohm-1/2 watt	Medium fast-smoke	Guaranteed action
Mark 4	2700 ohm-1/2 watt	Equiv. to burnout	Run for panic button
Mark 5	1000 ohm-1 watt	Exploding effect	?

For example, Mark 1 will give relatively slow but lingering results that will produce days of doubt and frustration and occasionally a real whiff of the familiar odor surrounding an over-heated resistor. Be sure to follow the prescribed wattage rating given in the chart.

Various combinations can be used for individual problems, a Mark 5 installed with a Mark 2, for example, gives a dual effect. In all cases we have observed from many case histories that the coincidence of perception is inversely proportional to the I.Q. of the victim.

A variation is the application of various compounds such as fingernail polish, speaker cement, insulating varnish or paint. Each of these refinements produces an effect displaying a strong individual character. They also change the tint of smoke produced which is an interesting variation.

Name withheld.

\*\*\*\*\*  
A letter from K3MAO, Bill Kruse, who also passed along a QSO "Hello" to me from WA6VTL; Bill Welsh.

Helen:

While I was on Navy business in Los Angeles, I met Bill Welsh. We were discussing Amateur radio and he said, "You have station K3NAL at NADC". Then he said, "One of your local clubs is Pack Rat and I know Helen well. I only know of her OM W3SAD." This is all from memory. He is a tremendous man and very devoted to amateur radio. In fact his entire family is devoted. \* He has helped approximately 19,000 people to become licensed. Many of these people are blind. He constantly receives tape recordings from the blind with questions. They leave 3 minutes space for him to answer and then he returns the tape with the answer. It would be nice of your organization, which he seems to know about, wrote an article saluting him.

Sincerely,  
Bill Kruse, K3MAO

P.S. He hangs around 14.32 MC SSB and 14.010 Mc to 14.020 Mc C. W.

\* WA6VTL, Bill Welsh; WA6VTM, Marie Welsh (wife) and WA6VTN, Richie Welsh (son)

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Thank you, Bill (K3MAO) and also Bill (WA6VTL) about a year or so ago we ran an article on Bill and his tape lessons for the blind.

\*\*\*\*\*  
Thanks to W3CXU, Johnny, we learned that W3ZRU, Elio, has added another deduction to his income tax. That is what he was doing at the Chestnut Hill Hospital. Congratulation Elio and Esther. Gled that it was a happy occasion.  
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SOMETHING GOOD ABOUT YOU

By William Barnes Lower

How it would help in the work of the day,  
As we pass by, on the busy highway;  
To have some one say, without much ado,  
You know, "I heard something good about you."  
(Ran out of space, will include the complete poem next month)

T.V.I. COMMITTEE

At the last Board of Directors' meeting, K3GAS appointed the following to the T.V. I. Committee; Chairman, W3MFY, Preston Funk  
W3HAB, Monroe Powell  
W3ELI, George Van Dyka  
K3DUW, Alan Goodman

The following members have requested and been granted Retired Member status;

WA2CCQ, Don Gillmore, W3FSC, Oscar Jacoby, K3BHK, Jerry Tessler, K3ESL, Ben Gindin, W3IXL, Ellis Hersh, and W3UMI, Willie Jones.

According to the By-Laws, ammendments, Article IV, Forfeiture of Membership, the following members have been dropped from the roll;

K3KKM, Woody Smallwood and K3LEA, John Frank.

Mark your membership books accordingly.

A new membership book is in the process. PLEASE report any changes or corrections to the editor, or the membership chairman, W3DL, Harry, immediately.

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SWAP & SHOPPE

Conducted by, W3ZRR, Raymond Whitehead  
4534 N. Smedley Street,  
Phila., Pa. 19140  
215- DA. 4-5910

FOR SALE: Heath Marauder 888 Xmitter.  
Professionally wired.

\$285.00

HQ 170-A receiver, with  
clock. \$275.00

Hornet Tri-band Beam, 10,  
15, 20 16500 with 10'  
mast \$ 30.00

CONTACT: K3IHF, Ed Guskin  
7121 Glenloch Street,  
Phila., Pa. 19135  
215- DE. 8-1231

FOR SALE: SX1111 Receiver  
Eico 720 & 730 Transmitter  
and modulator  
Globe V 10 VFO  
Make offer

CONTACT: K3QFF, Roy Lefkoe  
BR. 2-3650 until May 15  
TU. 4-5883 after May 15

WANTED: 1 clean Hallicrafter SX 42  
receiver.  
Will pay cash or trade.

CONTACT: K3AIQ, Bud Nelson  
3303 Indian Queen Lane,  
Phila., Pa. 19129  
215- VI. 3-7352

WANTED: Collins 9 mc Golden Guardian  
filter.

CONTACT: K3GAS, Doc Cutler  
7815 New Second Street,  
Phila., Pa. 19117  
215- ME. 5-1078 evenings

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COMING EVENTS

MAY 8 U.S.S. JOSEPHUS DANIELS DLG-27  
COMMISSIONING CONTACTS.

8&9 CQ MAGAZINE VHF CONTEST

14 NORTH PENN ARC BANQUET

15 ARMED FORCES DAY CONTESTS

JUNE 12&13 ARRL VHF QSO PARTY

AUGUST 8 PACK RATS' FAMILY DAY &  
PICNIC

MEETINGS

1965 WEDNESDAYS

MAY 19  
JUNE 16  
JULY 21 (outdoor)  
AUG. 18 (outdoor)  
SEPT. 15  
OCT. 20  
NOV. 17  
DEC. 15

GENERAL MEETINGS ARE HELD ON THE THIRD  
WEDNESDAY, when possible, at the WEST  
OAK LANE JEWISH COMMUNITY CENTER,  
SEDGWICK & THOURON STREETS, MT. AIRY,  
PHILA., PA. at 8:00 P.M.

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MEETING NOTICES

MAY 5 PHILA. COUNTY AREG.

12 DIRECTORS MEETING

The Board of Directors Meeting  
will be held on Wednesday, May  
12 at 8:00 P.M. at the QTH of  
W2AXU, Jack Power, 25 Van Dyun  
Drive, Trenton, N.J. Please  
call; 209-882 1040 if unable to  
attend.

19 GENERAL MEETING

The General Meeting will be held  
on Wednesday, May 19 at 8:00  
P.M.

ORDER OF BUSINESS: NOMINATION  
OF OFFICERS & DIRECTORS FOR  
1965-1966

SPEAKER: W3HIX, John Specialany

TOPIC: TRANSISTORIZED  
CONVERTERS

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NEW MEMBERS

WA3BRU, Henry P. Hover, Sr.  
WA3CAG, Preston D. (Dave) Funk  
WB2CAD, B. William Power

K3LWY, Michael A, Lefkoe (Student)

(Full information will be in the new  
membership book which you will receive  
shortly.)

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We note with much sadness the  
death of W3UMK, Dick Berens, May  
his soul rest in peace.

PACK RATS CHECKS BILLS  
821 W. Lindley Ave.  
Phila., Pa. 19141

W3CL

MEETING NOTICE