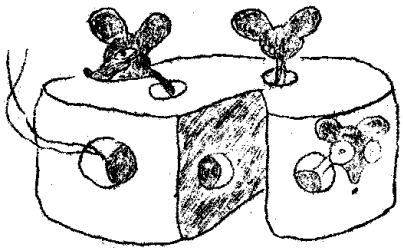
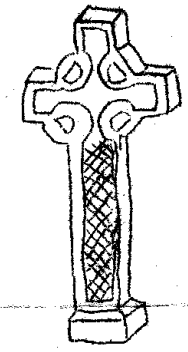


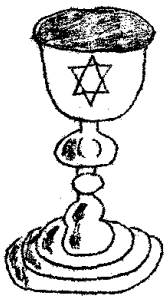
PACK RATS' CHEESE BITS

MT. AIRY V.H.F. RADIO CLUB, INC., PHILA., PA.
(50.2, 145.2, 221.4, 432.3 & 1296.4 MC.)
CLUB CALL: W3CCX
AFFILIATED MEMBER: AMERICAN RADIO RELAY LEAGUE
EDITOR: HELEN BRICK, XYL, W3SAO
MEMBER CLUB: DELAWARE VALLEY COUNCIL of RADIO CLUBS
MEETING NOTICES: LAST PAGE

VOLUME VIII APRIL 1965 NUMBER 1



Happy Easter ~
April 18
Holy Week ~
April 11 to 19



Happy Passover ~
April 17 to 24

(EDITOR'S NOTE: Some of our exchange publications are still using the old address. Please take note of our new address;

821 W LINDLEY AVENUE,
PHILA., PA. 19141

Thank you,
Mother Rat)

B U L L E T I N

From: W3AD, Lancaster Radio Transmitting Society

Subject: Moonbounce Communications, Amateur Radio Style

On April 23, 1965 the Lancaster (Pa.) Radio Transmitting Society will present Mr. Ed Tilton W1HDQ, VHF Editor on the staff of the American Radio Relay League. Mr. Tilton will speak on amateur radio communications via moonbounce, and will illustrate his talk with slides and tape recordings. The meeting is open to the public at no charge and all interested persons are invited.

For the past several years amateurs in this country and abroad have been experimenting with bouncing radio signals off the moon in an effort to extend communications on VHF frequencies to distances previously impossible. Mr. Tilton will explain the equipment and methods used by amateurs, as well as the results obtained. He will present recordings of off-the-air signals and pictures of typical moonbounce stations.

Mr. Tilton has been a life long experimenter in VHF and UHF communications and his experiences date from the 1930's. He has probably written more words on VHF than any other amateur and most professionals, and is a frequent contributor to QST and the Handbook. As VHF Editor of QST, and his many technical contributions, Mr. Tilton has become known throughout the world among amateurs.

The meeting will be held at the Hamilton Watch Company auditorium at 8:00 p.m. The auditorium is located in the Research and Engineering Building on Wheatland Avenue, Lancaster. This is behind the main plant which is located on Route 30 West, (Columbia Avenue) at the corner of West End Avenue.

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

10¢ a copy $1.00 a year

DEADLINE FOR ARTICLES: 20th of the month.

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

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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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W2AXU, BON POWER
W3LHF, DAVID ZIMMERMAN
W3HKZ, EDWARD KUSHNER
K3CIV, RALPH HERSH
(EX-OFFICIO)

****

APRIL BIRTHDAYS

K3RIT, Don; K3DLS, Carl; W3KKN, Ernie; W2SXO, Bill; K3IPM, Stan; W3HFY, Hal; W3DJV, Fred; K3ESL, Ben; W3GXB, Bob; and W3GLI, George.

Congratulations, and may you celebrate many more.

****

PHILA. COUNTY AREC

PLANNING MEETING Wednesday, APRIL 28, at 8:00 P.M.

REGULAR MEETING Wednesday April 7, at 8:00 P.M.

MEETING PLACE: GILBERT SPRUANCE SCHOOL, HORROCKS AND LEVICK STREETS, PHILA.

EDITORS' CORNER

With this issue, we begin our eighth year of publication.

It has been a pleasure to watch our "baby" grow, not only in size but also in popularity.

The success of "Cheese Bits" is due to the co-operation of the members supplying the material plus the generosity of exchange pulications permitting re-printing of articles, which in our opinion, we thought would be of interest to all.

For six years we did all of the work required to see that "Cheese Bits" reached your QTH. During our seventh year, we acquired a publisher and a subscription manager, K3GAS, Doc Cutler, who, each month gather a crew at his QTH to see that you receive it. To Doc and his crew we say, "THANK YOU."

Through the years we have always placed the call letters before the handle. You may ask, "Why?" The answer is simple; a ham is known by his call letters. A "Dr." in front of your name means that you are one of many different types; a "Mr., Miss or Mrs." designates only your sex; but call letters in front of your name, sets you apart as one of the group of finest humanitarians. So much so, that most of the states honor you with your call letters on your license plate.

Before call letter license plates, when you saw a car with an antenna, you said, "There's a ham." Now you say; "There's Joe, from Kokamo, or There's Sue from Kalamazoo." And, nine times out of ten, if you don't know them, you will look them up in the Callbook. We do.
BE PROUD OF YOUR CALL LETTERS, PLACE THEM BEFORE YOUR NAME!

We are happy to serve you, and with the help of God, we hope to continue to be at your service.

****

Received the following note just in time for our anniversary issue.

Dear Helen:

Have thoroughly enjoyed (and approved of) your mag. I hope you will continue with the righteous use of the press privilege...supporting the benevolent groups and avoiding publication of hate material, lies and innuendos. There is Stature in your mag.

Cordially,
Doug, W8HHS

****

W8HHS, Doug DeMaw is the former editor of VHFER. He now is Assistant Technical Editor to QST Magazine.

Congratulations, Doug, and a very sincere and humble, "Thank you."

The VHFER is not out of publication. The new editor is K7AAD, Loren Parks, Route 2, Box 35, Beaverton, Oregon 97005, who is also the publisher.

OUR PREZ SEZ

It's still not too late to make your reservation for our eighth Annual Ladies' Night. It should be a swell social evening with excellent food and drink, gifts for the ladies and door prizes for them also. The entertainment, although only known to the committee, is top notch. So call K3HWZ or W3CL for a reservation.

I have appointed a nominating committee consisting of the Chairman of the Membership Committee, W3CL and K3HSS and K3OBY. These men will bring in their recommendations for the next group of officers to serve the club for 1965-66. The members at large will be able to nominate whomever they wish at the May meeting. The vote will be cast at the June meeting. So look around amongst your fellow members to see whom you think will do the best job for the club.

W2EIF, Jo Kilgore is finalizing his plans as head of the June QSO Party and would welcome anyone who will take part in this enjoyable weekend.

Alternate net controls have been appointed to take over if the regular net control is absent, so don't forget to move your beams if you do not hear the regular net control. These are the alternate NC stations; 6 meters-K3HWZ; 2 meters-K3OBY; 220-K3IUV and K3GAS; 432-K3UJD.

Look on the last page for articles wanted as well as articles for sale.

Plans are in the making for a Pack Rat lapel pin and/or a decal for your car. More information later. Those Rats who made over 5000 points in the January contest, will receive some token for their effort, according to chairman, Dave Zimmerman, W3LHF.

It looks as though the new net times will find favor with all. Last night, (March 15) for instance, I was out of the shack by 10 PM. while in precious weeks I never left until 10:45, when the 220 net was finished. Last night we heard from all our members who had been in the hospital and are now home. I sure felt good to hear W3CFS, W3MXW, K3EOU and K3ALK. Keep away from those hospitals, fellows, and keep on the air so we know you are all OK.

73 for now

DOC, K3GAS

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ARRL BULLETINS

NR 994, FEB. 25

FCC has adopted reciprocal operating rules for foreign amateurs effective March 29. Application will be made sixty days in advance on new Form 610-A, available on March 29 from FCC offices and from some U.S. offices overseas. Copies of the home station and operator licneses must be furnished. A U.S. address must be given, and if mobile operation is intended, a rough itinerary. Permits will be issued for a maximum of one year at a time, from the Washington FCC office. Visitors will sign their home calls in English, followed by the appropriate U.S. prefix, giving actual location once during each contact. Full details will appear in April QST.

NR. 995, March 4

The Dominican Republic and the United States have agreed to permit reciprocal operating by amateur of one country while in the other. U.S. amateurs apply in Spanish to the Director General of Telecommunications, Santo Domingo. Dominican amateurs apply under rules of Subpart G, effective March 29, on FCC form 610-A. This agreement and a previous one with Costa Rica are under the authority of public law 88-313, which was S-920. Other agreements are being negociated. Full details will appear in April QST.

NR. 996, March 11

Oscar Three was successfully launched into orbit at 1830 GMT March 9. It is in an essentially circular orbit at an altitude of 502 miles, with an inclination of 70 degrees and an orbital period of 103.5 minutes. The translator passband is approximately 10 kc. lower than originally planned. A confirmed contact between K9AAJ and K2IEJ was reported on the thirteenth orbit, as well as numerous contacts between other call areas. European contact between HB9RG and DL6EZA has also been established. W6EE, the Oscar station, transmits corrected orbital data at 0000 and 0100 GMT on sideband, followed by RTTY then c.w. on 3810 7205 14,300 7040 14.080 7015 and 14,030 k.c. From 0400 to 0700 GMT W6EE will be on 3810 to collect information. Mail reports should go to Project Oscar, Foothills College, Los Altos, Cal. WIAW will continue to carry latest Oscar information as received.

NR. 997, March 18

OSCAR Three continues in operation, with new two meter records being made daily. At least two transcontinental contacts have been made. W6NLZ worked K2GUG and K4IXC worked K6HMS, apparently both on orbit 35. W1BU worked DL3YBA on orbit 61. WA6MGZ worked KH6AQP on orbit 64 and KL7CUH on orbit 65. W6QJW worked LU3DCA on orbit 69. The translator passband contains many signals in every pass within 1200 miles of populated areas. It appears that some DX opportunities are being missed because amateurs neglect orbits far out over the Atlantic and possibly over the Pacific. These are favorable for stations having low radiation angle arrays incapable of being elevated. Because of the high orbit, the effective range for communications is considerably greater than was first anticipated.

****

TO ZIP OR NOT TO ZIP

By Mother Rat

Remember when the Post Office first inaugurated Zip Code? Complaints arrived from far and wide; thick and fast, "What! Another number to remember?" Then the Post Office explained that it would speed delivery, the reply from John Q. Public was, "Ha!" Remember when you inadvertantly addressed a letter to the wrong state (it happens when you are addressing a number of letters) it was returned to you? Well, we did just that the other week, but we included the Zip Code number. Was it returned? No! The Zip Code number got it to its proper destination. How do we know? The person to whom it was addressed very kindly returned the face of the envelope. On it was written the correct state in blue pencil and stamped in the lower right hand corner is; "Correct address supplied by Post Office at Phila., Pa. -20".

The Zip Code number saved time. The letter was not returned to be re-addressed, but continued on its way.

MORAL: USE ZIP CODE NUMBERS!

****

BANQUETS

APRIL 10	PACK RATS' LADIES' NIGHT BUCK HOTEL, FEASTERVILLE, PA. $6.00 CONTACT K3HWZ, BILL or W3CL, HARRY FOR RESERVATIONS. DEADLINE: APRIL 5
APRIL 24	READING RADIO CLUB FRANK REGSER'S RESTAURANT Rt. 61 POTTSVILLE PIKE (4 miles north of Reading) $5.00 CHILDREN under 12 $2.50. CONTACT: K3YNN, ELMER WORTH, 946 Franklin Street, Reading, Pa. for Reservations. DEADLINE: APRIL 10
MAY 1	BUCKS COUNTY RADIO CLUB, BUCK HOTEL, FEASTERVILLE, Pa. FOR FURTHER INFORMATION, CONTACT K3HNP, Dave Heller, Box 311, Bristol, Pa. 19007
MAY 14	NORTH PENN AMATEUR RADIO CLUB, AUDUBON INN, EGYPT AND PAWLINGS ROADS, AUDUBON, PA. $4.00 CONTACT, K3ROK, JACK BARNSHAW, 309 Prince Frederick Street, King of Prussia Pa. DEADLINE: MAY 7.

****

TWO METER ACTIVITY

By W3LHF, David Zimmerman

The big news this month is, of course, "OSCAR III", the transponder sarellite. Most of you are aware of the operation of this device because of the publicity in QST and the discussion at the club meeting by Bert, K3IUV. It is evident however, that some of the gang has not taken the trouble to acquaint themselves with the facts, and, are causing come trouble in what is an extremely delicate and fleeting operation. That is communication by transponder.

So far, all I've been able to do is listen to the "HI" beacon and listen for CW signals coming back from the transponder. So far, I have heard K9AAJ, K4IXC, W4QHN, K3KEO, W1KSV and W1HDQ. Also parial call signs were heard of many other stations including some VE and W6 calls. W2AXU reports hearing a partial G2 call. I have no reports of a contact by a club member as yet, so please let me know if any occur.

Those who have not heard the beeps as yet, and want to do so, can probably get the exact time from our chief Oscar watcher, W2AXU or his assistant, W3CL. If you care for a bit of code practice copy, W1AW has a nice bulletin on 3555 kc every night at eight and the signal in this area blocks out twenty kc of the band. It's loud! You can also hear a lot of chatter on two, right on 144.1 before and after the pass, so there is plenty of info available.

Band operation during the past month has been spotty. Some of the gang is giving the band a good workout and the activity is more than welcome to many of the regulars on the band, particularly in the outlying areas. The nature of the two meter band is that it takes almost nightly operation to catch the openings. If you want to work DX on these bands, it is a must to at least turn on the receiver every night and listen.

Last month I reported a station in Baltimore looking for contacts. The call sign was garbled by me. It should have been K3VJY. Carl, K4WOB, is also on most nights, and is looking for contacts.

See you at the meeting, and let's remember to stay off the satellite frequencies, and also remember the gentleman's agreement about the CW section.

73, W3LHF

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TEC-NIC-KAL

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*-@ ,,Xx:? NOISE, AND HOW TO FIGHT IT %#**)@*x
&)*/ By W3MFY, Pres Funk ¢%"*@-:

Although electrical manufacturers do consider noise in the design of their products anf adopt every available means to suppress it, electrical equipment does age and develope troubles, which inevitably lead to noise production. No receiver, TV or radio on earth is completely noise free - yet, what counts in any RF receiving set-up is the amount of usable signal in proportion to the amount of unwanted noise. In other words, if our wanted signal is stronger than our unwanted noise, we communicators will seldom have too much trouble. A high signal to noise ratio is hard enough to achieve with modern techniques, let alone trying to combat noise produced by malfunctioning electrical equipment.

The following do produce noise when not functioning properly; Neon lamps and signs; heating pads; electric motors of all kinds; kitchen appliances (toasters, broilers, mixers, etc.) house wiring both internal and external; oil burners; ignition systems, power company transformers installations; shop equipment of all kinds, including arc welding equipment; high tension power line corona; poor or very loose ground connections; defective switches and relays of all types; defective tubes (especially those whose elements become shorted); internal meter arcing; improperly shielded and/or suppressed TV receiver oscillators; diathrrmy equipment; X-Ray equipment; refrigerators of all kinds; antenna installations (at the receiving station or near by) and small components such as resistors, capacitors, coils, diodes, etc. Noise is either conducted, radiated, or both. It can travel through a complicated wiring system. Sporadic or steady noise can be specific in frequency or it can be aperiodic (having no discernable single frequency characteristic). Often the type of noise sound heard via a good receiver will enable one to determine roughly what may be causing it. For example; we all know how noise caused by an automobile ignition system sounds. When the car engine is idling we hear a distinctive "puck, puck puck", as the engine speeds up, our pucks increase in number. The only really effective way to eliminate ignition noise is at the source. Of course those of us who have noise limiting circuitry in our receivers are able to attenuate the "pucks" to where they are not annoying. Noise from electrical motors is usually characterized by a steady high pitched whine. This is also true of generators.

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TEC-NIC-KAL (cont'd)

Neon lamps and other high voltage devices will usually radiate a noise that is characterized by its "hash" or a periodic type sound. Again, suppression is only effective right at the source.

A defective (pole pig) power line pole transformer will usually create a combination of sounds from a distinct crackle to a high frequency type hash. The noise is much stronger in wet or very humid weather. If loose connections are not the cause, nor can the trouble be pin-pointed, to an internal leak, replacement may be indicated.

Diathermy and X-Ray equipment are trouble makers when not opperating properly. The former throws out a "good" RF type of noise which usually does have a specific frequency, while the latter sounds like an old spark transmitter-its signal is full of harmonics and hash.

Vaccum cleaners are the bane of most Saturday morning contacts. Locating this offender is not difficult because it makes a mechanical, as wellas an electrical noise. The most effective cure is to connect two .1 Mfd capacitors in series and put the combination directly across the brushes of the motor. The center tap of the two condensers is connected to the vacuum cleaner frame. If this method does not work it may be necessary to install a brute force filter consisting of two coils in series with each line (leaving the condensers already connected) and then connect a like combination on the point side of the coils.

The location of a noise producing source is not always a simple matter. This is why such companies as the Stoddard Aircraft Radio Co., Inc. of Hollywood, California and the Sprague Electric Co. of North Admas, Mass. (among others) specialize in the production of interference location and measuring equipment. It must be remembered that an interference that will effect low frequency reception may not have any effect on frequencies at very, or ultra, high frequencies and vice versa. This is the main reason why much interference location equipment has been designed to cover a very wide range of frequencies.

You can make up your own "interference locater" by using a portable radio receiver and a directional antenna; both of which must be capable of covering, frequency wise, the bands in which you are interested. Now, with HF transistorized receivers on the market, these can be used very effectively in many cases to locate noise produced by nearly any electrical device. Here is another thing to remember; most electric power and telephone companies, in nearly every city in America, have a special "interference location section". If you have a noise which may be caused by telephone or power system, contact them for assistance. By using instruments, like those described here, their technicians can quickly locate the trouble and correct it. If you are not familiar with an appliance (refrigerator, sewing machine, mixers, stoves, neon assemblies, etc.) and its noise producer, it is better to call an experienced service man (affiliated with the compnay that manufactured the appliance).

Most noise can be filtered or shielded out of any electrical device AT THE DEVICE, using a brute force filter at a receiver is not often too effective but will help in many cases. Choosing the correct filter and/or shielding often requires the services of an expert, for it is very possible to affect the efficiency of a device by using wrong corrective measures. Some causes of noise and/or interference are very simple and can be corrected simply. For example; a radio taxi dispatcher, in one of our large cities, was continually experiencing a nerve wracking noise which opened the station's receiver squelch. No matter how he tried to adjust it, he could not cut out the interference with the squelch control without over de-sensitizing the receiver. A little investigation disclosed that one cab contained a mike with a defective switch that closed and opened intermittently as the cab bounced around the city.

Most noise problems can be solved easily and quickly ----IF THEIR CAUSE CAN BE TRACED.

73 and good hunting, W3MFY

****

SOME NOTES ON SWR METERS

By W3HKZ, Ed Kushner

SWR meter reads power of either the forward or the reflected wave. The RF output voltage from the sensing element is directional and proportional to the voltage in the line during either the forward or the reflected wave. It is also proportional to frequency in some meters. In better units it is frequency independent, they terminate in a capacitive reactance which is inversely proportional to frequency, so the meter reads the same at any frequency. The voltage is rectified, filtered and displayed on a meter, sometimes calibrated in Watts.

(Next Page)

Where should the meter be inserted. The meter extracts a voltage that is proportional. While the total voltage varies along an improperly terminated line, the component voltages do not. This is simply another way of saying that the energy contained in the forward wave remains the same from the source to the load, and that reflected energy remains constant from the load back to the source. Most meters can, therefore, be placed anywhere between the source and the load.

There are some logical exceptions. For instance, if the transmission line is long and loosy, some of the energy will be dissipated in it. A meter at the transmitter will measure power at that point and, when the meter is transferred to the antenna, will measure how much of it arrived. Incidentally, the difference betwwen the net power levels will then be the line or cable losses.

Similarly, a meter inserted between a transmitter and a low-pass filter indicates the sum of the fundamental and harmonic frequencies power in the forward direction, and all of the harmonic frequencies power plus whatever fraction of the fundamental is reflected in the reverse direction. If the meter is now transferred to the other side of the filter, it will only indicate fundamental power in either direction.

Information from April 1965 "Watts new from Bird"

****

NEW PRODUCTS OF INTEREST TO HAMS

By W3NSI, Lyn Rowland, Jr.

1. Transistor socket

   Type TO 3 transistor sockets (one pc) are now available from the Eby Co. The mounting plate constrution allows electrical isolation of the base connection. Base is made of bakelite and also available as a special order made of low loss mica. Contacts are of cadmium plated brass but are available in beryllium copper or phosphor bronze.

   Hugh H. Eby Co.
   4701 Germantown Ave., Phila., Pa. 19144

2. Low cost Mechanical filter

   Collins has now made available to hams and cb equipment manufacturers a new low cost filter unit for 455 Kc with a 6 Kc bandwidth. Signal to noise ratio improvement is said to be up to 8 db.

   Price-single units $12.00 ($7.00-100 lot)

   Local Collins dealers (Ham Buerger) should have sample quantity on the shelf about the time this is in print.

3. Chemical Cutting Fluid

   The Winfield Brooks Co., Inc. has a product which should be useful in freeing stuck taps and reamers and also in tool operations such as drilling tapping, threading, etc. It is not an oil, but a few drops will instantaniously break down metal-to-metal bonds, preventing excessive tool wear and breakage.

   Nonptoxic, non-flammable.

Note--Those interested in more information on the Amperex H4A Varactor diode may write the Amperex Co., Providence Pike, Slatersville, Rhode Island 02876 for Report S-121

This report is actually an application bulletin on the H4A $15.00, and has circuits and photos, doulber and tripler units as follows:

Doublers --	82.5 - 165 Mc	(2M)	Trip. --	77.5 - 232.5 Mc. ($1\frac{1}{4}$ M)
	116.5 - 233 Mc	($1\frac{1}{4}$ M)		
	232.5 - 465 Mc	(75Cm)		155-465 Mc (74Cm)

S-121 - well worth the trouble to write for and it is FREE

****

THE PACK'S RAT

By Carmen J. Diodati, K3PXT/AREA

Oscillators, Harmonics and Yoyos are the phonetics used by Tom Jones, W3CHY. Quite appropriate, as these are the gadgets that Tom uses to amuse himself, when he's not on 6meters needling his poor captured contact. Tom has been licensed sine 1947 and holds an Advanced Class license. He is heartily in favor of the controversal RM-449. Mostly because of the poor operating techniques, lack of courtesy and the QRM on the DC bands. These operators have

(Next Page)

convinced Tom that he entered the amateur radio fraternity by mistake.

In looking for a better hobby, Tom decided to have himself elected as president of the Chester County Amateur Radio Club. He achieved this goal by means of coercing, threatening and when all else failed, buying the necessary votes. However, reports are that he is doing an exceedingly good job, chances are he may be re-elected with no effort on his part. This will be due to the free after meeting chow he has managed to serve - via his excellent scrounging ability and very few friends.

His XYL, Isabel, spends her spare time informing Tom's very happy clients that Tom is not at home while he's busy heckling his fellow hams. She is most proficient at this;- in order to reach Tom via landline after the normal business day, you must have the pass word. If for no other reason, but of course there are many, Isabel really should have a mink coat.

The two harmonics, Tom Robert (dares'nt say Jr.), age 20 and Marian (Pretty Miss Jones) have a common interest; music. The difference lies in type. Miss Jones prefers the Beatles and Tom Robert prefers Blondes, oops, the high brow type of music. Tom's complaint - he's leading a dog's life, people have stopped talking to him on 6 meters, so he's putting his Cadillac equipment, a Clegg Zeus and Intercepter on 2 meters. He's looking for greener pastures and has found them. He now harrasses the novices. Most of his 6 meter contacts have asked Tom not to call them as they would rather call him.

Tom runs a very efficient and profitable Idiot Lantern Service Business, his major difficulty is the installation of deflection yokes. Seems that every time he runs into this requirement, the picture becomes a mirror image. His solution is quite novel - free mirrors for each deflection yoke job. When mirrors are not available his customers are requested to give up watching the boob tube and take up CB as a hobby. He sells lots of rigs this way. Besides it's more profitable than rewiring the yokes correctly.

Tom is a very happily married man, and quite generous to his beautiful 23 year old bride. For example; In a four way QSO he spoke of the beautiful mink coat Isabel would be adorned with come Ladis Night. One of the listeners called his XYL to extend warm wishes and congratulations on her very good fortune, only to learn it wasn't a mink coat, nor a mink stole, nor even a mink muff, but a rabbits foot on a key chain. Isabel said, "The printing advertising the local gasoline station is beautifully done in gold."

In reality, Tom is a very pleasant fellow to know. He is likeable, friendly and generous. With friends like Tom you don't need enimies.

****

K. U. I.

By W3HKZ, Ed Kushner

CB BAND MULTIPLEXED

From recent experiments conducted in a laboratory, it has been determined that the present use of multiplexing on transmitters has been completely under-developed.

In a laboratory experiment being conducted to determine the maximum number of subcarriers that may be transmitted over a single transmitter, it was discovered that htere is practically no limit to the number of subcarriers that can be transmitted; the only problem being that of maintaining complete linearity in the transmitting system and the proper means of separation to be provided at the receiving point.

As a result of these experiments, the multiplexing of frequencies between 26 mc and 27 mc is proposed.

Using amplitude modulated subcarriers spaced 10 kc apart throughout the so-called CB "D" band from 26 to 27 mc, remarkable results have led to the proposal of a relocation of the spectrum that will solve many problems.

At this time, it is proposed that the CB band be turned over to other services and each major community throughout the nation install a super powerful transmitter which would be used to convey the multiplexed CB band carriers. Each station would pipe its program over telephone lines to the main distribution point at the super powered transmitter.

At the receiving end none of the existing CB receivers in the hands of the public would be made obsolete. To each receiver would be added a small fron end converter which would pick up the signal, demodulate it and make available through loop coupling, the subcarriers in the range on the CB band. These signals would then enter the regular antenna circuit of the existing CB receiver and by tuning the CB receiver the listener would have his pick of which subcarrier to receive. From then on, for all normal purposes, the reception would be the same as the regular old-fashinoned CB receivers.

(next Page)

Since taxicab, police services, ets., are in dire need of additional frequencies, to mention a few, the CB band could be turned over to them.

Another feature of the system would be that the super powerful transmitter being used to convey all subcarriers would have no mainchannel modulation. This would be very confusing to an enemy in time of war, because they would not know what was being transmitted since the main channel would appear to be blank when they turned it on.

Several equipment manufacturers have agreed to pool their efforts in providing the country with the hundreds of thousands of front end converters that would be required. A still further technical advantage of the system would be that no AVC will be needed in the future CB receivers, thus cutting down the cost and making CB service available to more people. There are, of course, many other economic factors that are self evident.

Name withheld
Submitted by W3HKZ

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DID YOU KNOW

That when the March meeting was cancelled due to inclement weather, K3KVS, Jerry and W3IXL, Ellis turned out for the meeting? That K3GAY, Don, also braved the elements from Allentown and upon learning that the meeting was cancelled, went to the QTH of W3CL, Harry for a visit until 1:00 A.M. the next morning?

That W3FSC, Ozzie, fell and broke his left arm, was in the hoepital for and operation and upon leaving the hospital, left again for California, and upon completion of his trip to California will head south, where his company is opening another plant?

That K3EOU, Paul, has a get well card waiting here for him from WØCCD, Grandma Lou, Omaha, Nebraska? Grandma sent it to the hospital, but Paul had left for home. Frankie was going to give it to him at the cancelled meeting.

That K3GAS, Doc, is recovering from an attack of "executive flu"?

That W3OZP, Bill, will not be leaving for Germany and will be at Ladies' Nite with Helen?

That W3IBH, Charlie, has been back on 2 meters after being ill and repairing his rig?

That Polly, the XYL of the late W3AYG, John, will be attending Ladies' Nite along with a lady friend?

That W3CPT, Ken and his XYL, Sophie have returned from a trip to Jamaica? Business and pleasure combined.

That we wish a speedy recovery to all our sick members and freinds whom we did not know were sick?

That Mother Rat just got her finger out of the splint in time to do all of the art work (?) in this issue?

That K3WEU, Paul, lost his antenna for 6 meters and is waiting to have them replaced? Bad weather is holding up the job.

That on one of the Hazel programs, the story showed that the TVI was the cause of a faulty heating pad and not that of a ham?

That W3CCX received the following QSL card? "To all Cheese Bits of the Pack Rats. Please accept my sincerest tnx for the F.B. QSO's, I enjoyed with those members I contacted while at Lankanau. My apologies to those I missed. Vy 73 to a swell bunch of Guys." Caesar, W2SIV.

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U.S.S. JOSEPHUS DANIELS DLG-27

On May 8, 1965 at approximately 2000Z, the U.S. Josephus Daniels, DLG-27 will be commissioned and will also begin amateur operations at the same time.

(Next Page)

Field Day type contacts would be more than welcome and beautiful QSL cards will be sent to each and every contact.

The frequency will be at or near 14,300 kcs. This frequency will be maintained as long as signal strength with incoming stations lasts. Any proposed frequency changes will be given on the circuit.

The purpose of this first operation will be to meet as many hams as possible on the day of commissioning.

73,
Eugene F. Leafty RMC
WB6HWZ/MM

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ARMED FORCES DAY COMMUNICATIONS TESTS

This year's test will be conducted on May 15, 1965, at which time you may qualify for the one time QSL card from each of the military stations. Features: MILITARY TO AMATEUR CROSSBAND OPERATIONS, CW RECEIVING CONTEST, RTTY RECEIVING CONTEST.

Schedules: MILITARY TO AMATEUR, STATIONS: WAR, NSS and AIR will be on the air from 151400 GMT (0900EST) to 160245 GMT (2145 EST)

CW RECEIVING CONTEST:International Morse Code at 25 WPM.

RTTY RECEIVING CONTEST: 60 WPM.
AMATEUR FREQUENCIES: (MCS) 3.5-3.65, 3.65-3.8, 7.0-7.2, 7.1-7.2 and 14.0-14.2 (WAR) ARMY RADIO (CW)

3.5-3.65, 3.65-3.8, (CW) 3.65-3.8. (SSB) 3.8-4.0, 7.0-7.1, 7.1-7.2, (RTTY)7.0-7.2, (SSB)14.2-14.35, (CW) 14.0-14.2, (RTTY) 14.0-14.2 (NSS) NAVY RADIO

(RTTY)3.5-3.8, (CW) 3.5-3.8, (SSB) 3.8-4.0, (CW) 7.0-7.2, (SSB) 7.2-7.3, (RTTY) 7.0-7.2, (CW) 14.0-14.2, (SSB) 14.2-14.35 (AIR) AIR FORCE RADIO
All stations are in Washington, D.C. (SSB) under NSS should read (SSB/AM)

CW RECEIVING CONTEST: Time 2200 EST (KCS) 3269, 3347, 3397.5, 4015, 6970, 6992.5, 7301, 13995, 14440, 14405, 7315

RTTY RECEIVING CONTEST: Time 2235 EST 3347,3365, 4012.5, 4560, 6992.5, 7315, 7380, 14405, 14480

Transcriptions should be submitted "as received". Time, frequency and call sign of the station copied as well as the name, call sign and address of the individual submitting the entry must be indicated on the page containing the text.

Entries should be submitted to the Armed Forces Day Contest, Room 5B960, the Pentagon, Washington, D.C. 20350 and postmarked not later than 31 May 1965.

R.E. Mickley,
Lieutenant Commander, USNR,
Chief, Navy MARS

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FCC 65-143
63456

In the Matter of Amendment of Part 19 (now part 95) Citizens Radio Service, to revise Subpart D, Station operating Requirements, and to make other changes. Docket No. 14843

(We will just quote paragraphs No. 37 and 38)

37. ACCORDINGLY, after reconsideration, IT IS ORDERED, this 24th day of February, 1965, that Section 95.83 (a) (1) of the rules IS AMENDED as shown in the appendix attached hereto, and that all other amendments to Part 95, Citizens Radio Service, adopted by the Report and Order (FCC 64-687) on July 22, 1964, ARE AFFIRMED; and
38. IT IS FURTHER ORDERED,That these rules shall become effective April 26, 1965. (End quote)

(from Amateur Radio News Service Bulletin)

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PACK RATS PICNIC

It's not too early to plan to attend this annual event which is always held on the second Sunday in August at Fort Washington State Park, Flourtown, Pa.

Just a sample of what is in store for you in the way of prizes. HA-1.

Only costs $1.00 per family.

SWAP & SHOPPE

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

FOR SALE: HQ170 C Mint condition.
used 3 years $200.00

CONTACT: K3PXT, Carmen J. Diodati
93 N. Hilltop Drive,
Churchville, Pa. 18966
215-357-6299

FOR SALE: 1. one kilowatt transmitter, 80-10 meters, CW and plate modulated AM phone.
a) 50 W 6146 all band exciter section $35.00
b) Kilowatt class "C" final amp. using 2 parallel 813 tubes with B&W 850A pi-network output assembly $75.00
c) Plate modulator section using 2 811 tubes, complete 1500 V power sup. $50.00
d) Final amp. plate power sup. 2300 V with bridge connected 866 tubes. Plate Xfmr rated 3KVA and operates from 115 VAC, 60 cycles. Swinging choke incl $75.00

2. Collins 75A3 rec. #878 with F455 8-3 mech. fil. Factory realigned about 5 yeers ago. $300.00

3. 5', 19" rack cab. $20.00

4. Misc. pwr xfmrs, tubes, caps. Make offer

CONTACT: K3QFF Roy Lefoe
215- BA. 2-3650

FOR SALE: HQ100 C. Clock & Timer. No speaker. Gen. coverage Broadcast band, 230 MC with bandspread, Ham band 80-10 Mint condition.
Asking $100.00
Make offer

CONTACT: W3ELI, George Van Dyke
4607 Convent Lane,
Phila., Pa. 19114
215- NE. 7-8329

WANTED: Collins Receiver of the 75 A series. Will sell or trade HQ 170 A with converters for 6 and 2 meters and National NC 125

CONTACT: K3BAS, Doc Cutler
7815 New Second Street,
Phila., Pa. 19112
215- ME. 5-1078

FOR SALE: From estate of W3AYG
Complete year's supply of CQ & QST magazines. Also HB VFO with power supply tunes 8 mcs. other items.

SEE or CALL: K3BAS

FOR SALE: 1 kw Johnson Viking match box. Cat. #250-30 brand new. Cost $125-pick-up
$50.00

6 meter xmtr. 125 W Phone & CW. 3E29 driven by 2E26, Mod. by pair of 6L6's. Dow change over relay & blower. In Grey steel cab., 10½" x 22" x 15". Perfect condition. Will demonstrate Pick up for $125.00

CONTACT: W3SNM, Chester Angetadt
Box 327, R.D. #3
Fleetwood, Pa. 19522
215-929-0548

FOR SALE: NC-270 mint con., factory service rechecked $150.00
HRO-60 with 7coils, inc. 50mc, product detector, xtal calibrator, etc. Ameco preamp for same, also 2 meter preamp and converter, metal cabinet speaker. $225.00
Barry 220 rig with power supply and modulator, fully metered in nice case with modified R48 receiver and Ameco preamp, xtal mike, coax relay, colinear ant. with 80' of coax. $110.00
Ameco TX-62 xmtr updated & factory modified for 2 meter TVI, push button spot, VFO switching to rear, new type case with lid. $150.00
MM-2 monitor scope $60.00
Sylvania 7" scope $30.00
Tube tester $15.00
Preamp power supply $5.00
VHF/UHF Freq. Generator 50-950 mcs. $60.00
Decade inductance box
Many other items including power supplies, modulation xfmrs, B&W Matchmaster for 72 ohms, coax switches, RG8U coax cable, 4-elemnt halos meters, tubes, etc.

WANTED: Vacuum variables for low freq. work. State size and price.

CONTACT: K3HWZ, Grandpa Bill
215-357-4972 (AM 676-1654).

FOR SALE HB 6 meter station 95% complete. Small home or portable
OR station.
PART TRADE 3 Chassis:
1. receiver BC 455. Modified with noise limiter
2. converter, works good, converter power supply receiver power supply Xmtr metering not wired TR switch and relay.
3. Xmtr, 2E26 final complete not tested. Modulated converter, not tested Power supply tested OK calbes, schematics & metal carrying case. No Xtals or mikes. Size-10"x8"x4"

Need cash, but will take part in trade.

CONTACT: K3AQH, R. Bailey
215- RA. 5-6460

FOR SALE: 52mc. xtal con. 50 W AM
BY (6146) fixed freq. base sta-
K3ORT, BOB tion. Rev'r uses Ameco nuvis-
Pabst tor conv. to dual conversion IF (7mc 2nd 1500 kc) fixed tune. TNS included. Both mounted in cab. $100.00

MEETING DATES

1965 WEDNESDAYS

APR 21
MAY 19
JUNE 16

GENERAL MEETINGS are held on the third Wednesday, when possible, at the West Oak Lane Jewish Community Center, Sedgwick and Thouron Streets, Mt. Airy, Phila. at 8:00 P.M.

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MEETING NOTICES

APRIL 7 PHILA. COUNTY AREC.

14 DIRECTORS' MEETING
The Directors' meeting will be held on Wednesday, April 14, at 8:00 P.M. at the QTH of W3SAO, Frankie, 821 W. Lindley Ave. If you are unable to attend, please call, 215 DA. 4-7524

21 GENERAL MEETING

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NEW PHONE NUMBER

W3ZTL - 215-VI. 3-3194

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Due to the cancellation of the March 17 meeting, Home Brew Nite has been postponed indefinately.

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LATE K.U.I. Just received from W3HKZ, Ed Kushner

OSCAR'S VOICE HEARD 'ROUND THE WORLD

By Walter Mathews
Fairchild News Service

LOS ALTOS HILLS, Calif. -- Oscar III, the latest "home-made" repeater satellite for amateur radio operators has successfully opened up new communications distances for ham operators around the world.

The 35-pound satellite, built by a group of hams in the San Francisco bay area, was placed into a 500-mile, 103-minute orbit March 9 from Vandenberg Air Force Base, riding as a passenger on a classified Air Force vehicle.

It is expected to have an operational life of about five weeks. Operating in the normally "line-of-sight" 2-meter radio amateur band, Oscar III has already made possible 2-way ham conversations over great distances, such as between Massachusetts and Germany and California and Argentina.

Oscar III is the first multiple-access, linear translator satellite to be placed in orbit, according to William I. Orr, president of the Project Oscar Association (POA) and an engineer at Eitel-McCullough, Inc.

The association, made up of about 50 Bay Area ham operators, designed and built the satellite. It is a non-profit corporation operating under the direction of the American Radio Relay League.

Mr. Orr said Oscar III is designed to receive amateur signals at one end of the 2-meter band (144.1 mc) and to instantaneously retransmit the signals to the opposite end of the band (145.9 mc).

Reports to project Oscar indicate the satellite is being used extensively throughout Europe and Australia.

Lence Ginner, K6GSJ, Palo Alto, who is co-ordinating manager for the project, said the translator equipment aboard the satellite appears to be working normally, although a secondary beacon transmitter is not operating.

The main telemetry transmitter on 145.85 mc is returning "excellent data," he said.

The predecessors to the satellite, Oscar I and II were launched in similar fashion in 1961 and 1962 and were also successful although more limited in purpose.

(From Electronic News, Monday, March 22, 1965)

COMING EVENTS

APRIL 10 PACK RATS' LADIES' NITE

24 READING RADIO CLUB BANQUET

MAY 1 BUCKS COUNTY RC BANQUET

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

8&9 QQ MAGAZINE VHF CONTEST

14 NORTH PENN ARC BANQUET

15 ARMED FORCES DAY CONTESTS

JUNE 12&13 ARRL VHF QSO PARTY

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Don't forget April 23, the Lancaster Radio Club meeting with Ed Tilton speaking on Moonbounce---8 PM at the Hamilton-Standard Bldg. Lancaster. Pack Rats invited.

PACK RATS CHEESE BITS
821 W. Lindley Ave.
Phila., Pa. 19141

W3KKN, Ernest Kenas
2823 Old Welsh Rd.
Willow Grove, Pa. 19090