

PACK RATS'



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

CHEESE BITS



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.

VOLUME IV

OCTOBER 1970

NUMBER 10

OUR PREZ SEZ

Congratulations! What for? For making the last issue of CHEESE BITS the best in the past three years. Fourteen pages, the most that we can mail for one 6¢ stamp. It finally happened. Ye Old Ed had to pick out a few items and save them for the next issue. If you have submitted an article and have not yet seen it in print, never fear it will be printed.

You've all heard of the constant complaining, threatening, and persuading that is done by the editor of every amateur radio club newspaper for articles. The Pack Rat net controls have joined the solicitation and low and behold it worked. I can't possibly describe the pleasure I had in having the CHEESE BITS typist ask "What can you hold until next issue?" instead of the usual "What fill-in from another paper do you want to use?".

Can you imagine getting CHEESE BITS one day and not being able to finish reading it until the following day. WOW! What a goal to shoot for.

And so for Doc, K3GAS, our publisher; Lloyd, K3ZPN, our printer; and the rest of the CHEESE BITS staff, I thank you. The paper is as good as you make it and I submit that you have created something to be proud of.

K3JJZ, E1

DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING.

EDITOR:

K3JJZ, ELLIOTT WEISMAN, ARNS
8533 ALGON AVENUE
PHILADELPHIA, PA. 19152
215 - PI 2-3525

TRUSTEE OF CLUB CALL: W3CCX

W3SAO, FRANCIS BRICK
821 W. LINDLEY AVENUE
PHILADELPHIA, PA. 19141
215 - DA 4-7524

PUBLISHER AND SUBSCRIPTION MANAGER:

K3GAS, DOC CUTLER
7815 NEW SECOND STREET
PHILADELPHIA, PA. 19117
215 - ME 5-1078

PRINTER:

WA2KOI, LLOYD SCHOENIG
207 WOODLAWN AVENUE
COLLINGS LAKE, N. J. 08094

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 - 9:30 P.M.
432.3 - 10:00 P.M.

OFFICERS - 1970-1971:

PRESIDENT: K3JJZ, ELLIOTT WEISMAN
VICE-PRES.: W3CJU, DONALD HAMPTON
TREASURER: K3GAS, DOC CUTLER
CORRES. SEC.: W3SAO, FRANCIS BRICK
REC. SEC.: WA3BIV, CARL BARISH

DIRECTORS:

K3KTY, JOHN TATE
K3MXM, LEE COHEN
WA3LNH, CHARLES BENAVIDES
K3UJD, MARIO FONTANA
K3BPP, WALTER BOHLMAN
K3CIV, RALPH HERSH
(Ex-Officio)

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

10¢ per copy \$1.00 per year

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.

On Friday, September 4, we were saddened to learn of the death of Libby Power, the wife of Jack Power, W2AXU; the mother of Will, WB2OAD and David.

Lib was a person of fine moral texture, a loyal wife, mother and grandmother. She took great pride in her work for social and civic betterment. It was always a pleasant challenge to discuss the problems of the present day with her.

Besides being the mainstay of her family group, she was a quiet supporter of the Pack Rats and the Delaware Valley Chapter of the QCWA. Her pleasant smile and quick wit will be missed by all of us.

A memorial service was held at the First Unitarian Church, Trenton, New Jersey on Sunday, September 20.

ARRL BULLENTN NR 286, August 20, 1970
The new edition of the ARRL Net Directory is now ready for distribution, earlier than in recent years. This useful operating aid tabulates net listings by frequency, net name and state. An addressed legal size envelope with twelve cents postage will bring your net directory to you by return mail. When requesting, please mention the call and frequency of the station transmitting this bulletin AR

THE BOARD OF DIRECTORS

The following was abstracted from "Crosstalk", a publication of the GCARC. It is printed primarily for the benefit of our newer members.

The Board meetings are held on the Wednesday before the regular club meeting. These meetings are held at the homes of the members of the Board. Although not mandatory, the OM and XYL hostess for the evening usually provide liquid and solid refreshment which greatly contributes to the social and business success of the evening. Generally, club members are not encouraged to attend these meetings unless having a specific purpose in doing so, i.e. you wish to present a proposal or suggestion to the Board. Otherwise, additional members present only serve to throw more fingers-in-the-pie and extend the length of what is already a lengthy, comprehensive business meeting. The reason meetings generally are several hours long is simply due to the oratorical prowess of the affluent Ham operator. Nonetheless, the real work of the club goes on during the Board meetings, which according to our Constitution, it certainly should.

The Board meeting format is identical to that of the regular club meeting format, i.e. the same order of business, the same committees are called upon for a report, etc. The essential difference regarding committee reports is that the Board is constantly assuring that the committees are, in fact, doing their job and are functioning. For example, a no report from a particular committee may, in reality, mean the committee and its chairman haven't seen each other for two months, and as far as they know, there is no report because none of them know if anything went on that month anyway. Hence, it's up to the Board to see through this smoke screen and get that committee hoppin! In regards to old and new business, the Board here consumes much more space than at a regular club meeting. This is the time where club member's ideas are hashed about the counter or new ideas are brought up by individual Board members as well. In this area, it is the Board of Director's mandate to recommend policy and ideas to the club and to see that all policies, programs, ideas, etc., which have been agreed upon are carried out to successful conclusions. But, the Board is human too, so that it is the duty of each member to carefully follow all that is going on and to correct any mistakes or offer any suggestions if a better way or plan is available. Hence, to a large extent, the business of the club is pretty much run by the Board, which in a democracy is the way it should be done. We vote for congressmen and senators who vote for us in Washington, etc.

Of course, there are obvious advantages and reasons why our club is set up this way. The primary reason is that we don't want the monthly club meetings to become two or three hour business meetings with hot debate grinding on and on over some grave issue. It is much more pleasurable to all concerned if the business meetings are as short as humanly possible so that plenty of time is available for the program and for eye-ball QSO's over coffee and buns at the end. Experience has proven that, if controversial issues are not left up to the Board to iron-out, such issues can consume many, many minutes of more enjoyable program time. Another obvious reason is that very often a debatable issue, which seems highly important to several club members, may not raise the eyebrows of another group of members who proceed to fall asleep while the debate rages on and on between the others. The rule-of-thumb is simply for each of us to think before raising a point during the regular club meeting, namely, is my motion highly debatable or controversial? If not, proceed. But if so, then take it up with one of the Board members who will present it at the Board meeting, or ask to appear before the next Board meeting to present the idea in person.

Continued on Page 4

THE BOARD OF DIRECTORS (Continued)

Unquestionably, the club has traditionally tried to elect its best to the Board, the best having proved themselves usually in word and deed to the nominations committee and to the membership at large. With this tradition and experience as a guide, there is no reason to expect that our club's future will not continue as efficiently and smoothly as in the past. It is up to the Board to insure that this is so, but it is up to the membership to insure that the best representatives comprise the Board.

FOUNDATION FOR AMATEUR RADIO, INC.

PRESS RELEASE

The Foundation for Amateur Radio, Inc., a non-profit organization, with its headquarters in Washington, D.C., announces its intent to make the annual award of the John Gore Memorial Scholarship for either graduate or undergraduate study. The Scholarship pays \$500 for the academic year. Upon re-application, it is subject to being renewed for succeeding years.

Licensed radio amateurs who intend making a career in electronics or related sciences may now request the application for covering the academic year 1970-1971. Requests should be addressed to the Chairman, Scholarship Committee, 8101 Hampden Lane, Bethesda, Maryland 20014. The award will be made during the month of December 1970. Receipt of applications for the award must be received prior to the close of business on the 31st of October, 1970.

To be eligible for the award, applicants must have completed at least one year in an accredited college or university and must be enrolled in a course of studies leading to a degree. They must also be radio amateurs holding a valid FCC license of at least a general class level. All things being substantially equal, preference will be shown to applicants from the area served by the Foundation - the District of Columbia, Maryland and Northern Virginia; however, applicants wherever resident are eligible.

The Foundation is devoted exclusively to promoting the interests of amateur radio and to those scientific, literary and educational pursuits that serve to advance the purposes of amateur radio.

John W. Gore, in whose honor the Scholarship is named, was until his death in 1960, the President of the Foundation. He was a prominent radio amateur and operator for many years. At the time of his death he was a Vice-President of the Bethlehem Shipbuilding Corporation in Baltimore, Maryland.

FROM THE BOOK RACK

de Paul R. Behrmann, K3WEU/AREA*

ELECTRONIC CIRCUIT DESIGN HANDBOOK Third Edition (TAB Book No. 101) by Editors, EEE Magazine

Published February 1970, 384 pages, 19 sections, over 750 illustrations, \$17.95 hardbound

The just revised and expanded Third Edition of this well-known circuits "classic" contains well over 600 (over 100 more than the prior edition) proven and tested circuits for all types of functions, selected on the basis of their originality and practical application.

FROM THE BOOK RACK (Continued)

Electronic Circuit Design Handbook is a handy compendium of design ideas. This carefully planned reference source of over 600 different tried and tested circuits is a detailed compilation of practical design data, and the answer to the need for an organized gathering of proved circuits....both basic and advanced designs that can easily serve as stepping stones to almost any kind of circuit desired....and that can be adapted or modified to suit the reader's own specific needs. This practical information will help engineers solve their daily problems....and will save hours of time and effort. These accurate and clear circuit descriptions are supplemented by over 750 easy-to-follow diagrams, waveforms, and illustrations which contain all component values and other needed data.

Electronic Circuit Design Handbook is a GIANT of a book. To supplement its over 600 circuit designs, it contains over 750 schematic diagrams and illustrations. These tried and tested circuits constitute a vital source of ideas and techniques, and serve as "imagination triggers" for anyone who has an interest in electronic circuit design and construction.

CONTENTS: Control Circuits - Regulator Circuits - Protection Circuits - Filter and Suppression Circuits - Pulse Circuits - Comparison Circuits - Amplifier Circuits - Oscillator Circuits - Indicator and Alarm Circuits - Counting and Timing Circuits - Test and Measurement Circuits - Generator and Simulator Circuits - Converter and Inverter Circuits - Power Supply Circuits - Detection and Sensing Circuits - Display and Readout Circuits - Gating and Logic Circuits - Relay and Switching Circuits - Miscellaneous Circuits.

*Amateur Radio Editors Association

NEW PRODUCTS OF INTEREST TO HAMS

E. T. Clegg Associates, Inc., Littell Road, East Hanover, New Jersey 07936

The new Clegg Comet SSB 2M Transmitter is scheduled for delivery in September. The unit is self contained including power supply and will be available with a crystal covering the 145-145.5 range. Four other ranges can be switched from the front panel, once the proper crystals are installed. Popular Electronics Magazine listed the Comet as a Trans/Rec in their write-up on new equipment in the August issue, but this was an error, as the unit is just a SSB/CW Transmitter. Power is listed as 125 input and 40-50 output, with a panel control for adjustment of the power out. Tentative price is \$399.50 and a high powered linear amplifier will be available in the near future, according to the manufacturer.

Weckesser Co., Inc.

A series of plastic press clips, half press clips, and cable keepers are now available from this company. They might find use in station wiring around tables and consoles, or for running coax, etc., along walls or baseboards. The units come with an adhesive backing, which when peeled off, provides permanent bonding to various surfaces. Holes sizes available run from 1/8" to 3/4" and prices range around 3 or 4 cents each.

Continued on Page 6

Mel predicts the auroras by the position of the first four or five planets in relation to the sun.

He also presented a slide show of the birth to death of an Es session of the June 20, 1968.

W4FJ talked on "V.H.F. - Past, Present and Future".

Bob Cooper, W5KHT, discussed the "Strip Line Pre-Amp" similar to his article in "Ham Radio" for August with improvements.

The evening started with more discussion by W2BOC of aurora propagation - and ended with a social hour - hic.

Bob Cooper, W5KHT, started the Saturday session with a discussion of 144 MHz Scatter, Es, etc., propagation. Bob uses TV and FM signals in his studies since they are more reliable. Bob uses strip chart recording of these carriers of distant stations. He has a lot of clear channels and frequencies down in Texas.

Jon King, W3GEY/K8VTR, of AMSAT gave a most interesting talk and slide show about Oscar V and future Oscars. It is interesting to note that the future Oscars may be limited to the 144 MHz band because it is the only exclusive international amateur assigned band. Future Oscars are planned to be more sophisticated and aimed at benefiting mankind in general.

Paul Wilson, W4HHK, presented a slide show and talk on his 2300 MHz moon-bounce attempts with Bill Smith, W3GKP, and the contact over a 249 mile path with WA4HAN/4 as discribed in September QST.

Bill Smith, K0CER, QST VHF columnist presented a slide show and talk of his KL7ABR and 2FIDT adventures. A most interesting hour.

The evening brought a family picnic, bull session and social hour until the wee hours.

Sunday morning Dick, W5RAG, gave a fine talk and demonistration of "Computer Techniques for the Amateur". He demonstrated his scatter CW QSO machine.

There was a noise figure measuring session, a business meeting and the prize drawing.

Next year's conference will be held in Souix Falls, South Dakota on August 20, 21 and 22. K0CER is conference chairman.

There were 69 hams registered, many with their wives and families. The ladies had many interesting events planned for them.

Anyone for Souix Falls next year? The W3's should be represented. Their conference is the finest V.H.F. get-together in the country.

Continued on Page 11

NEW PRODUCTS OF INTEREST TO HAMS (Continued)

Antenna Specialists Co., 12435 Euclid Avenue, Cleveland, Ohio 44106

This company is now handling the line of imported British antennas that were once distributed by W9HOV, Gain Inc. in Chicago. Units are available for 6, 2, and 432 mc. (I suppose the 220 mc version was dropped due to its lack of popularity.) Some of these antennas are better known to club members as "J" Slot beams. Prices seem to be the same as when they were imported by W9HOV before his death. It is also noted that Antenna Specialists continues the policy of referencing their beams to a regular dipole antenna, unlike several large companies that use an isotropic antenna, allowing their specs to reflect an additional 3 db gain, an inflated figure of course.

W3NSI, Lyn Rowland

TWO METER 220 AND 432 REPORT

The 2 meter band has been acting normally, that is with no openings of particular note and little if any aurora. The September QSO party is another story. One of the biggest and best band openings of the year occurred with some stations reporting 22 to 26 sections worked on 2 meters and as high as 22 sections on 432. As for myself, I worked Ohio twice on 432 and heard Kentucky and a WA9 which I could not copy complete. Conditions were so good on 2 that I was able to work Ohio with the beam stuck toward Connecticut. Note that a majority of contacts for sections are made on CW particularly 2 meters and up. This was also true of the June contest for the 220 and 432 bands.

W2EIF, Jo Kilgore

CALENDAR OF COMING EVENTS

Syllabus by Lee, K3MXM

OCTOBER

- 14 Board of Directors Meeting - QTH of Joe Kilgore, W2EIF, #5 Sunnybrook Court, Strafford, New Jersey. Directors and interested parties invited.
- 28 First Indoor General Meeting of the Season - West Oak Lane Jewish Community Center, Thouron and Sedgwick Streets, Philadelphia, Pa. at 8 p.m.

PROGRAM: Slow Scan TV - Applications, Hardware and Demonstrations

Robert F. Stone, W3EFG and Allan B. Schechner, W3YZC, Project Engineers from the General Electric Space Labs at Valley Forge, Pa.

Meet JOE RUSHTON, W3YXF, our new hospitality chairman and food dispenser. Rumor has it that Joe is buying doughnuts 13 to the dozen so be prepared for good after meeting eating.

CALENDAR OF COMING EVENTS (Continued)

Undated Events

January Sweepstakes Co-ordinator Meeting with Walt Bohlman, K3BPP.

NOW is the time to look over your antenna and its hardware. Arrange for the antenna parties. Make your wants known on the nets.

Transmitter Hunt with K3UJD.

Antenna Measuring Party.

Articles for CHEESE BITS should be in Elliott's hands by meeting time.

NOVEMBER

11 Board of Directors Meeting - QTH of W3SAO, Frankie Brick, 821 West Lindley Avenue, Philadelphia, Pa.

18 General Meeting - West Oak Lane Jewish Community Center (See next issue for program.)

A special salute and thanks should go to our editor Elliott Weisman, K3JJZ. This issue marks his third year as editor and look how far we have come. What does he have in store for us for the next three years? A hearty round of thanks from the entire club to you.

8 months to go - 15th Anniversary Dinner - Buck Hotel - May 8, 1971

RECENT EQUIPMENT

Double Balanced Mixer for use between 150 KHz and 200 MHz - Mixer is the ring modulator type. R.F. and L.O. parts are interchangeable. IF port is DC coupled. Useful for mixer in SSB equipment and 50 and 144 MHz connectors. Conversion loss and NF is 5 db at 50 MHz and about 7 to 8 db at 144 MHz. The unit, Type DBM-1, is manufactured by the Anidus Engineering Company, Box 8, Arlington, Mass. 02174. Cost in single units is \$8.50. Company will send you complete specifications.

W2AXU, Jack Power

Interested in helping those less fortunate than yourself?

The Problem: Patients in a state hospital need help to be motivated to hasten their recovery.

Partial Solution: An amateur has volunteered to teach patients basic electronics to get their Novice Class license.

Remaining Solution: Need a novice transmitter and receiver to set up a club station at the hospital.

Anyone having a novice setup or portions thereof they can donate for a worthy cause is asked to contact Stan Kasper, W3ZGG, Curtis Lane, RD#2, Lansdale, Pa., phone 584-6453.

SWAP SHOP

Conducted By: W3ZRR, Ray Whitehead
7329 Shelborne St.
Phila., Pa. 19111
215 - RA 2-4786

FOR SALE OR TRADE

- New Tube Sockets for 4X150's, 4CX250's, etc., with built in screen by-pass capacitors (limited number).
- New Stoddart Attenuators, Model 90500-10, 50 ohm, 10 db, and Model 90520-11, 50 ohm, 10.6 db.
- 4CX125F Eimac Power Tetrodes useable to 500 mc, 125 watt plate dissipation, physically identical to 4XC300 except for cross axis fin arrangement. Beautiful for use in a vapor phase or water cooled amplifier.
- New RF Feed Thru and By-Pass Capacitors
470 pf RF (VHF/UHF) button type
500 pf RF (VHF/UHF) button type
1000 pf RF Feed Thru
and other valves for VHF/UHF converter, transverter and transmitter applications.

These are high quality items. Trades considered for like items. I am presently looking for an Eimac SK-800 series tube socket for a 4CX1000A.

CONTACT: K0ZZM/WA3LNH, Chuck Benavides
1218 Meadow Lane
Perkasie, Pa. 18944
215 - 257-5681

FOR SALE OR SWAP

- 2-M Transmitter (4-125's) 200 watt output - complete MAKE OFFER

CONTACT: Howard Bacon
456 Abington Avenue
Glenside, Pa.
884-8282

FOR SALE

- G50 Transciever - like new with mike \$125

CONTACT: K3YLL, Harvey Bartashnik
1721 Griffith
Philadelphia, Pa. 19152
PI 2-0483

FOR SALE OR TRADE

- Ferris 22A Signal Generator
85KHz to 25 MHz 0.1 mv to iv \$125
 - Trio Lab AC VTVM 10 mv to 300 v
10 MHz to 200 KHz \$50
 - HP200J Audio Generator \$150
 - Counter HP524B/HP525A equivalent
Plugin head up to 100 MHz
(Military Quality) \$550
 - Frequency Meter FR4/4
100 KHz to 20 MHz 0.001% \$85
 - HP410B AC, DC, VTVM to 700
MHz \$125
 - Ballantine 310A AC VTVM 10 MHz
to 200 KHz 1 mv to 100 v \$100
 - Power supplies, meters, trans-
formers, VHF parts and UHF
- All guaranteed in excellent condition.
- CONTACT: WA3KNN, Stephan Karpati
2136 Parkdale Avenue
Glenside, Pa. 19038
643-2900 - Ext. 387

FOR SALE

- Hallicrafter HT40 Xmtr 80 thru 6
AM and CW. \$25
- 6 and 2 meter converters - inter-
national built into rugged case
with power supply and cables \$25
- Surplus TG10 tape player with
14 CW tapes \$25
- 6 meter HB Xmtr and modulator -
converter, turner and 2 mikes -
ARC 5 VFO - all power supplies \$50
- 6 meter SSB - venus and apollo -
HB10 power supply - Clegg SSB
booster - turner SSB mike \$425

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

CENTRAL STATES V.H.F. CONFERENCE
Jack Power, W2AXU

The Central States V.H.F. Society held their V.H.F. Conference this year in Wagoner, Oklahoma on August 21, 22 and 23, 1970. The location was in eastern Oklahoma in Sequoyah State Park at the Western Hills Lodge. The lodge is located on a 20,000 acre man-made lake called Fort Gibson Lake, 50 miles east of Tulsa.

Lib and I arrived in Tulsa via TWA on Thursday, August 20, and were met by W5HFV and his good wife Dot. They drove us to the lodge. There was a goodly number of the attendees already registered. The Thursday night "bull session" was fun and interesting. This is a great group of dedicated VHF-UHFers.

The conference got underway at 08:00 Friday with registration. The first talk was by Dick, KOMQS, titled "Moonbounce Techniques". He started off with a most interesting and comical tape he said was how not to run a meteor scatter contact and he was right. It illustrated how confusing it can become with the weak signals and a third party.

The highlight of Dick's talk was his description of a rhombic antenna he constructed for his moonbounce efforts. The rhombic was 100 wavelength long at 144.0 MHz. Its dimensions were 342 feet per leg - a total of 680 feet in length and 58 feet 6 inches in width. It was made of No. 18 copper clad steel wire. Just these dimensions are staggering for a ham, but Dick had 8 of these things stacked 6 feet apart, the bottom one being 6 feet off the ground. Theory says, and this was checked by the Collins Computer, that one will give maximum gain and not more than 2 should be used. However, Dick's experience showed that the 8 were superior. He had put them up one at a time. The rhombic was essentially aimed east and west, non terminated. It had about a 3 degree radiation angle. It is the VK3ATN type. His aperture of the moon was for only a short time each day and only about 14 days per month. By the way, a single one of these rhombics would be useful from 160 meters (1.8 MHz) down. The gain at 144 MHz appeared to be about 30 db, but how does one measure it!

Mel Wilson, W2BOC/WLDEI, was our next speaker. Mel talked about Propagation Phenomena. As many of you know, Mel has been predicting auroras for the past year or two. His batting average is not bad - about 80%. There is a phenomena associated with auroras and there are very long distance paths that occasionally occur just as the aurora is breaking up. It is characterized by a pure tone signal - as opposed to the buzzing like signal of an aurora - over a long path such as 1200 to 2400 miles and across the auroral zone - such as east or west. It is very important that an understanding of the phenomena be gained. Mel wishes to have detailed data of any contacts made in this manner.

Auroras are normally thought to be caused by sun flares and that they occur 36 to 48 hours following a flare. However, some auroras occur before a flare. Why?

Another question is, does this T9 signal effect have a MUF effect - that is, does it start from a lower frequency and move up or a higher frequency and move down? The questions are basically when?, what frequency?, what bearing?

Continued on Page 5A

Mt. Airy VHF Radio Club, Inc.
1971 V.H.F. SS Contest
January 9-10, 1971

Committee: W2EIF
K3GAS
W3ZD

Co-Chairmen: K3BPP
K3IPM

Coordinators and Teams (* 2nd Coordinator)

WA3NFV	K3EOD	K3OBY
W2AXU*	WA3ERQ*	K3IGX*
WB2OAD	WA3BRV	WA3FOF
K2LZA	WA3CND	K3GAS
K3GQJ	K3ESL	WA3HIT
K3ZVD	W3GEW	K3HSS
	W3HK	W3IXL
WA2KOI	K3JJZ	K3MXM
W2EIF*	K3KUB	W3SAO/W3CCX
K3BHK/2	K3KTY	K3ZKO
W2DIL	W3KXH	
WB2IOE	W3NSI	K3DLS
WB2NOK	W3PST	K3SMA*
WB2SZK	W3ZRR	W3AJF
		K3AUH
W3FGQ	K3EPB	WA3BIV
WA3GNV*	W3ELX*	K3CIV
K3DUC	K3AA	K3EHQ
W3NLT	W3BAA/W3BQU	K2HJA
W3OR	K3BPP	W2HYO
K3WEU	W3BRU	W3IA
K3YPL	W3CJU	WA3JSR
	K3EOU	W3WIJ
W3CL	WA3LNH	W3ZTL
WA3FAA*	K3UJD	
K3ACR	K3VEQ	K3ZSG
W3CXU	W3YXF	WA3NGK*
WA3EPS	W3ZD	K3BOY
W3IHT		W3CLT
WA3LMT	W3FQD	K3DUW
W3ISV	WA3AXV*	W3HKZ
W3KKN	K3IPM	WA3IDQ
K3KMN	K3IUV	K3OPC
K3NMN	W3JSD	W3QB
W3SMK	K3WGJ	W3RZU
	K3WGK/W3BEL	K3ZCY

Coordinator meetings will be announced on the nets.

TO ALL PACK RATS

The January Contest

What the January Contest means to me:

1. A chance to participate in the major club event of the year.
2. A chance to make new friends and to hear some old ones.
3. A chance to work new sections.
4. A chance to try out new equipment ideas and put them to a real test.
5. A chance to test ones physical endurance.
6. A chance to try out a new band.

What the January Contest means to the club:

1. It keeps us in the position of being top VHFers in the country.
2. It demonstrates what can be accomplished with team effort.
3. It sets us up as the club others are trying to beat (we can not afford not to have your participation).
4. It gives us nationwide recognition and prestige.
5. It creates a common bond between members.
6. It demonstrates a readiness in communication ability in the event of an emergency.

What does the January Contest mean to you fellow club members?

Co-Chairmen
K3BPP
K3IPM

Attendees

W1FJH/4
 W2AXU
 W2BOC/WIDEI
 W3GEY/K8VTR
 W4PJ
 W4HHY
 W4CDO
 K4NIV
 W5BIC
 W5PCD
 W5GNE
 W5NET/K6EDX/KV4FU
 W5KFM
 W5KND
 W5PIT
 W5OPH
 W5RAT
 W5RFX
 W5UGO
 W5WAK
 W5WOB
 WA5UNL

WA5UVM/K4VOW
 K6KJD/K6QEH/W3KWH
 K6JYO
 K7NII
 WA7NGK
 W8DGF
 W8IDU
 WA8LLY
 WA8TYF
 K8DEO
 K8LZF
 K8REG
 W9BRN
 W9IFA
 W9HNH
 W9JZR
 W9KOI
 W9MAL
 W9VWY
 WA9NRB
 WA9SRW
 WA9UHB

WA9UWL
 WB9DKQ
 WB9EQP
 K9DKW/W9JNT
 K9HNB
 K9UIF
 K9VNM
 K9ZGT/WA8PIE
 W0DRL
 W0EMS
 W0EYE
 W0GNS
 W0LCN
 W0PFP
 W0WYZ
 W0YZS
 WA0CHK
 WA0RDY
 K0CER/KL7ABR/ZF1DT
 K0GQA
 K0TLM

HARRY STEIN

W 3 C L

Best Regards

You are know by the company
 you keep. Deal with the best - our
 advertisers-and join with them
 with your own business card ad.
 Only \$ 3.00 for 3 time insertion.




HEATHKIT ELECTRONIC CENTER
A Dayton Products Corporation Unit

T. G. HALDIS
 Manager

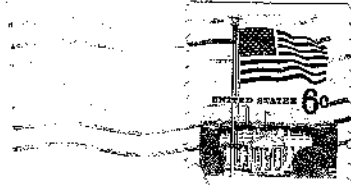
K3-PK

6318 Roosevelt Blvd.
 PHILADELPHIA, PA. 19149

Telephone (215) CU 8-0180

<p>morton d. mazer WA3EPS REAL ESTATE 1608 E. WADSWORTH AVENUE PHILADELPHIA PENNA 19106 (215) CH 6-1602</p>	<p>OLDFIELD 9-4440  RESCO ELECTRONICS A Division of Adams, Inc. <i>Radio Electric Supply Co. of Pa.</i> DISTRIBUTORS OF ELECTRONIC EQUIPMENT EUGENE CASTROVILLO MANAGER 28 YORK ROAD WILLOW GROVE, PA. 19080</p>	<p>K3MXM JE 3-4660 4661 LEE A. COHEN CLAYTON L. HADY & SON INCORPORATED 4527-31 HEDGE STREET PHILADELPHIA, PA. 19184 WIRING BODS ALL KINDS CLOTHS COTTON & WOOLEN WASTE</p>
<p>LO 7-7130 K3KTY TRANSPORT EQUIPMENT COMPANY <i>"Everything for the Truck"</i> JOHN A. TATE HOME PHONE OR 9-8840 2215-2217 BACE STREET PHILADELPHIA, PA. 19103</p>	<p>PHONE: 662-6114  BARRACKS TRADING POST Camping - Electronics Canvas RT. 38 at RUDDEROW AVE., MAPLE SHADE, N.J. HARVEY PRIMOST</p>	<p>BEN SCHAEFER WA3ATP (215) 449-2300 KASS ELECTRONICS DISTRIBUTORS DISTRIBUTORS OF INDUSTRIAL ELECTRONIC PARTS & EQUIPMENTS RADIO - TELEVISION PRODUCTS 2502 TOWNSHIP LINE ROAD (WEST OF LANSDOWNE AVE.) DREXEL HILL, PA. 19026</p>
<p>ECI EDGEMONT COMMUNICATIONS, INC. R D #1 BOX 156 NEWTOWN SQUARE, PA. 19073 JONATHAN B. BALCH PRESIDENT TELEPHONE 356-4444 AREA 215</p>	<p>PIONEER 4-2628 - 27 WA3JSR - BEN G & G Metal Products STEEL FABRICATION - FORMING AND STAMPING SPOT WELDING - ARC WELDING B. GINSBERG 1709-18 GILLINGHAM STREET PHILADELPHIA 24, PA.</p>	<p> A. G. RADIO PARTS CO. 927 TOWNSHIP LINE, ELKINS PARK PA W3BHR 2876 TU 6-2700</p>

Pack Rat Cheese Bits
8533 Algon St.
Phila. Pa., 19152



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



PACK RATS

FIRST CLASS MAIL

MEETING NOTICE

"Ham" Buerger, Inc.
AMATEUR RADIO IS OUR BUSINESS

STORE HOURS

MON. 9.30 TO 11.30
FRI. 10 TO 11.30
SAT. 5.30 TO 9.30
TUES. 9.30 TO 11.30
THURS. 1.30 TO 9 PM.
WED. 9.30 TO 9 PM.

try World travel...first class!



Sit down to one of the new GT-550s...switch on that tremendous power...and pick up one of your favorite DX contacts. You'll swear you're talking to the guy next door!

This is *the* rig. The one they all want. And now you understand why. Makes you want to go home and throw rocks at your own outfit.

The price kinda surprises a guy, too. Doesn't cost as much as you figured to own the best. You can add those great matched accessories one at a time until you have everything a ham could want.

Wonder what you can get on a trade-in? Ask your dealer.



GALAXY

80 York Rd. -:- Willow Grove, Pa.



0 L 9 5 9 0 0