

PACK RATS'



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

MT. AIRY V.H.F. RADIO CLUB, INC., PHILADELPHIA, PA. ARNS
(50.2, 145.2, 221.4, 432.03 & 1296.3 MHZ)
AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE
MEETINGS: THIRD THURSDAY OF EACH MONTH AT 8:00 P.M.
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CHEESE BITS

VOLUME XV

SEPTEMBER, 1973

NUMBER 9

THE PREZ SEZ

Wasn't that a great Pack Rat picnic on August 12th? The weather was good, the picnic committee provided us with many scheduled activities, and it certainly was nice to chat with our QCWA friends, families of our members and others whom we seldom see except for this occasion.

Having been picnic chairman some years ago, I am personally aware of the amount of effort that this event entails. This includes the chairman's planning, management and the delegation of responsibilities so that the many tasks associated with the picnic will be properly accomplished. Obviously all were done well, thanks to our picnic chairman, Don, W3CJU, and to all the others, too numerous to cite individually, who assisted him.

When someone does a job well repeatedly and with little fanfare we frequently take him and the job for granted and forget the amount of effort expended to accomplish it. There are numerous examples of this in our club activities, but at this time it is most appropriate to acknowledge one of these persons. For many years, when picnic time rolls around, he has assumed the responsibility for placing direction signs around a large area, bring numerous items of Pack Rat memorabilia and putting them on display, and providing coffee, tables, PA system and a host of other items at the picnic site. He did the job again this year in spite of significant problems with his health, and he did it extremely well; even the membership rosters were completely up to date. Therefore the risk of incurring the wrath of those not mentioned individually above, special kudos to Frankie, W3SA0.

Dick, W3FQD

* * *

Reinstated to Membership:
W3IXL, Ellis Hersh

Application for Membership:
W3KM, William Benner
412 W. Raymond St., Phila., Pa.

Change of Address:

WA3LNH/1, Charles Benevides
103 Peabody
Stow, Mass. 01775

WA3NFV, Daniel L. Mitten XYL-Lucy
1082 Sandy Ridge Rd.
Doylestown, Pa. 18901
215-345-1348

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DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING.

SWAP SHOP ITEMS - NO CHARGE

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821 W. LINDLEY AVENUE
PHILADELPHIA, PA. 19141
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#5 SUNNYBROOK COURT
STRATFORD, N.J. 08084
609 - 783-9478

TYPIST:

WA3TEM, MARSHA STEIN

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W3YXF, JOE RUSHTON
WA3NGK, HARRY BROWN
K1SFF/3, TONY SOUZA

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

MONDAY NIGHT NETS:

145.2	-	7:30 P.M.	W2EIF
50.2	-	8:30 P.M.	W3CL/W3GEW
221.4	-	9:00 P.M.	K3GAS
432.03	-	9:30 P.M.	K3IUU
1296.3	-	10:00 P.M.	K1SFF/3

NET CONTROL

FRIDAY NIGHT NET:

439.250 ATV NET -
19:00 HRS.


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A 5

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CALENDAR OF COMING EVENTS
SYLLABUS BY LEE, K3MXM

SEPTEMBER

- 2 YORK COUNTY HAMFEST, Elickers Grove near Thomasville, Pa. Off U.S. Route 30 about 10 miles West of York, Pa. A good one to attend; big flea market, activities for children and ladies. Money Prize drawing, first prize \$300.00. Transmitter hunts, tube guessing. Plenty of food available. Talk-in 16/76, 94/94 and 52.525. Registration \$3.00 at door.
- 9 25th Annual SJRA Hamfest and Picnic Molia Farms, Malaga, N.J. K2AA, Talk-in 7.26 Mhz, 50.3 Mhz and 146.19/79. Protected bathing area. Plenty of picnic tables. Gigantic swap shop and table and tail-gate selling. Valuable ham prizes. Registration \$3.00 per family.
- 9 Findlay Ohio Hamfest.
- 10 Board of Directors Meeting - QTH to be announced.
- 14,15,16 ARRL Roanoke Division Amateur Radio Convention, Sheraton Convention Center, Reston, Virginia. Three big action filled days of talks, meetings, contest, flea market, films, banquets and a Wouff Hong Ceremony. See W3CL or W3HK for a circular with registration forms.
- 15 The Hamburg International Hamfest - Erie County Fair Grounds, Hamburg, N.Y.
- 15 - 17 16th Annual Pennsylvania QSO Party. Send logs to Nittany ARC, P.O. Box 60, State College, Pa. 16801. See QST for rules and full details.
- 15 - 16 Space Net Contest, honoring Apollo 10. 6:00 p.m. your local time to 6 p.m. on Sunday. Single or multi-op category. Club participation. Trophies - 1st and 2nd place. In 4 power classes Each QSO = 2 points. Each different zip code = 1 multiplier. Each contact on different VHF bands counts as 2 points; zip code, however, only counted once. All modes except repeaters. Join the fun - send in your logs for the Pack-Rats to Tony Slapkowski, WB2MTU, Director, Box 909, Sicklerville, N.J. 08081
- 19 Third Outdoor Meeting of the season -WHITE ELEPHANT SALE. Last chance to clean up the cellar before the winter sets in. If you missed the hamfests, one chance remains. QTH, Joe Rushton, W3YXF, 107 Rosewood Drive, Lansdale, Pa. (see enclosed map) All area hams from all clubs cordially invited to attend. Refreshments available.

OCTOBER

- 7 2nd Annual Pack Rat HAMARAMA, There are still some jobs open. Please contact Dave Zimmerman, W3ZD and offer your services.
- 18 First Indoor Meeting of the season. Note new meeting place. Map included in this issue.
- 21 Gaithersburg, Maryland, Hamfest.

The VHF bands seem to be suffering from the usual midsummer effect; that is vacations, lawn mowing and other outside activities. The VHF nets on Monday nites seem to be holding their own. The meteor showers have come and gone for August and some of the boys in the Northeast worked Texas, Oklahoma and South Dakota. I had no luck as usual either East or West.

August 17 has produced a UHF/VHF tropo opening for the last 4 years running. It will be interesting to see if it happens again. Keep your ears open!

Six meters was open Friday, August 10 around noon time with California stations coming in nicely but from the Northwest! I managed to work Stan, W6ABN with good signals. Also, there was a short skip (400 miles) at the time but found no signals on 2 meters. Don't forget the September QSO Party which starts Saturday afternoon, 3:00 p.m. September 8 and ends 2 a.m. Monday morning. You can pick any 2 consecutive 14 hour periods within that time frame to operate. I usually operate part of the 1st 14 hour period, get some sleep, go to the SJRA Picnic and return to work the last 8 hours or so of the contest. It is a sort of fun contest mostly looking for sections, and because they count as additional multipliers when worked on another band, all VHF bands are active. So have fun and put in a little time on it and make sure your gear is ready for January.

Good luck

* * *

PACKRAT CERTIFICATE

As Chairman of the Awards Committee and certificate maker/outer, I have been asked by W3CL to outline the requirements for earning our beautiful certificate. It is printed in blue on a gold background. The names and call of the certificate winners are hand printed in two colors. I know of no other certificate which is done in this way. It is free, and only requires that, when you work the required number of stations, you prepare a list of the stations with the frequency, time and date worked. The requirements are as follows:

1. Standard Certificate: Work 30 packrat stations on any band, 50 Mhz through 1296 Mhz or up. Submit list with frequency, time and date worked to W2IEF, Joe R. Kilgore, No. 5 Sunnybrook Court, Stratford, N.J. 08084. If you are over 50 miles from City Hall, Phila., you need to work only 10 Packrats.
2. 6 Meter Certificate: Same rules as above except all contacts on 6 mtrs.
3. 2 Meter Certificate: Same as number 1 except all on 2 meters.
4. Ditto for 220, 432 and 1296 except number is 10 instead of 50.
5. January Contest Certificate: If within 50 miles of Phila. City Hall, work 50 Packrats on 6 and 2 meters. These should be different stations. If you are beyond 50 miles from Phila. the number is 20. Good Hunting!

Joe, W2IEF

* * *

VISITORS AT THE AUGUST 15TH MEETING (FROM OUR GUEST SIGNATURE BOOK)

Carmela, XYL, W3ELX; Susan, XYL, K3HIN; Loretta, XYL, K3GAS; Helen, XYL, W3SA0 (Mother Rat); Harriet, XYL, K3IUUV; Lorraine, XYL, K3JJZ; Sylvia, XYL, W3CL; Florence (WA2WYE), XYL, W2AXU; Teddy, XYL, WA3JSR. K3PXX, Terry Runyon, Phila. K2UYH, Al Katz, West Windsor, N.J.

* * *

TID BITS

Sixteen clubs were represented at the Pack Rat Picnic among them the LIGA Colombiano De Radio Aficionados. HK1AMW/W3, Belmar attending college here and Tony, HK4CYX/W2 who is in the U.S. on a work visa. We exchanged some interesting stories (The editor lived 2 years in Brazil). A couple of old friends and former Pack Rats showed up, W2KFC/4, Lee and Big John, K2SMZ. It was real nice to see them once again.

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TID BITS CONTINUED

The regular outdoor meeting on August 15th ended up indoors due to threatening weather conditions. Over 40 members and guests ended up in the living room of K3IUV our host. We were lucky all the regular furniture had been removed as the result of a redecorating job, our hosts were most gracious and many thanks to Harriet and Bert. Helen (Mother Rat) ran some interesting color film of past picnics. Doc, K3GAS showed some excellent slides of club events. Mario, W3ELX showed some unusual night shots of our recent Hilltown venture. Of all the pictures taken during the raising of the 28 foot moonbounce dish at K2UYH, the ones shot by Jack, W2AXU were outstanding. Al Katz, (K2UYH) our guest that evening did a running commentary during the slide showings and fielded a number of questions. The XYL's present seemed to enjoy the technical presentation. We all adjourned after the meeting to the kitchen for coffee, danish and small talk.

Congratulations to the Warminster ARC making number 1 in the July 21, 22 VHF Space Net Contest. Bob, WA3HOW led the pack with first place in the low power class and high man in his club. Rich, K3ACR was first in the medium power group and led the Pack Rats who came in second in club participation. Our typist, Marsha, WA3TEM (home from a 2 week Switzerland vacation) drove the editor to the mini-hamfest at the QTH of WB2MTU on Sunday August 19th. It was a pleasure to receive the awards for Rich, K3ACR (on vacation) and the Pack Rats. It was a fun get together meeting the Space Net crowd, many for the first time in person. Our ad salesman K3MXM, his XYL, Peggy and Paul, WA3HIT were the other Mt. Airy representatives. Thanks for the nice time and the goodies, Tony. We are looking forward to the September 15/16 contest honoring Apollo 10. Keep those zip codes rolling.

Tony, WB2MTU reports the discovery of a new comet named KOHOUTEC after its Checkoslovak discoverer. It will be visible to the eye starting the week of December 29, 1973 and is expected to be as spectacular as Haley's Comet was in 1910. There is a possibility that VHF communications will be affected.

It is reported that WA7FSI (Gary) recently a participant in the Space Net Contest is located on a 7900 foot peak in Idaho and is looking for contacts on 6 meter SSB or CW.

Congratulations to Woody, W3PST (recently recovered from a bout with a kidney stone) who has been appointed to the ARRL Emergency Communications Advisory Committee.

Our condolences to Alan Rubin, K3AUH and family on the recent death of his father

Tony, K1SFF/3 has been up in VE3 land weeding a lake bottom.

New Pack Rat directories are in preparation. Please submit any changes to W3CL or W3FQD.

* * *
CENTRAL STATES VHF CONFERENCE 1973
BY JACK POWER, W2AXU

The Central States VHF Society held their 7th Annual VHF conference at the Marriott Inn in Bloomington, Minn. near Minneapolis, on Friday, Saturday and Sunday, August 17, 18 and 19. There were 105 radio amateurs registered. They brought their families and represented all call areas. The East Coast was represented by W1HDQ, WA2WOM, K2RTH, K2RIW, W2AZL, W2UK, W2AXU, W3GEY and K3KMV. The program for the conference was excellent and of a technical nature that would hold the interest of any VHF amateur. W1HDQ, Ed Tilton presented a slide show. The History of EME (Earth Moon Earth propagation) - showing equipment used by radio amateurs from the first efforts to the present day. Dick Knadle, K2RIW,

CONTINUED

gave two very informative talks, one on VHF/UHF Antenna Design and the other on High Power Transmitter Idiosyncrasies. Mel Wilson, W2B0C presented a special film produced by WA5HNK of Mel's maps of the Es opening of November 8, 1970. The Es was in animated form showing the birth, the life and the death of the sporadic E clouds for that day in 5 minute intervals.

Jan King, W3GEY, Vice President of AMSAT, gave a preview of the forthcoming Oscar 7. It is expected to be launched in April or May, 1974. It will contain a transponder with input between 432.125 and 432.175 Mhz and the output between 145.975 and 145.925 Mhz at 14 W PEP output. There will be a beacon at 145.980 Mhz. A second transponder will have an input between 145.85 and 145.95 Mhz and the output between 29.50 and 29.40 Mhz with a beacon on 29.5 Mhz. There will be a beacon on 435.1 Mhz and on 2304 Mhz. Jan showed slides of OSCAR 6 and the future OSCAR 7 in the making. Walt Boim, W3LTU, talked on Metcor Scatter as only an expert in the field can as ellected to by his exploitation in meteor scatter communications.

Roy Hejhal, who has a K7 call from Phoenix, Az., representing Motorola, talked on VHF/UHF Solid State Amplifier Design discussing many design parameters and pitfalls. Stephen Mieth, W6YFK, presented a slide-talk show on 1296/2304 Mhz Hints and Kinks. From my standpoint it was what every well equipped 1296/2304 Mhz ham station or NASA tracking station should have. This fellow is fantastic! His equipment is professional in every respect, but is ham constructed - except for the dish and 584 mount of course. His tapes and TV pictures from the Apollo Rover Skylab mission are professional quality.

John Fox, W0LER, and Ron Dunbar, W0MJS, discussed a new found interesting phenomenon they have observed on OSCAR 6 and other orbiting bodies - inverted doppler. It has been discussed in the VHF column of QST and has raised many eyebrows because the phenomenon does not follow the theory.

The Saturday night banquet was a great success with the ladies dressed so colorfully in their long gowns and looking so beautiful. The Third John T. Chambers Memorial Award was presented to Ralph (Tommy) Thomas, W2UK, for his outstanding contributions to VHF/UHF amateur radio. W1HDQ made the presentation. Larry Shima, W0PAN, the Dakota Division Director, was the main speaker and he was followed with a few remarks by Charles Compton, W0BU0, the First Vice-President of the ARRL. Prizes were distributed to the lucky and then all dispersed to the various rooms for more sociability and technical talk. Next years' conference will be in Colorado the same weekend.

* * *

FROM GLENSIDE NEWS - AUGUST 16, 1973 - SCOUTS LEARN MORSE CODE

Several hundred boy scouts participated in code classes held at the national Scout Jamboree in Meraine State Park, according to Jamboree Counselor for the merit badge, Pete Shavney, WA3OHV from Glenside.

Shavney said, "This was a unique experience, teaching requirement 5 WPM (International Morse Code) to the huge groups of scouts at the same time. Due to the size of the classes, it was necessary to use the PA system, part of the U.S. Nav exhibit."

Several dozen scouts were successful in completing the five word per minute code test (same as the novice license) held the last day thereby qualifying for the Partial certificate. Many more had learned enough code to qualify easily upon return home."

An estimated three to four hundred scouts also enjoyed using the elaborate station facilities set up by the American Radio Relay League for the Jamboree. Our transmitters were in simultaneous operation and the scouts completed contacts to over 3,500 stations in all 50 states and 60 foreign countries. In addition

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SCOUTS LEARN MOORSE CODE CONTINUED

to the 44,000 scouts at Jambo-East, about 30,000 attended Jambo West at Faragut State Park, Idaho, and twice a day schedules via amateur radio were maintained.

Editors Note: Pete, WA3OVH is one of our own Pack Rats.

NEW PRODUCTS OF INTEREST TO HAMS

By Lyn, W3NSI

1. 500 Mhz Prescalers: The Micro-Z Co. has introduced three prescalers which may be used with low frequency counters to measure frequency up to 500 Mhz. The PS 510 will divide by ten or 100 making it possible to use this unit with counters that normally go only to 5 Mhz. A second unit, the PS 502, will divide by ten to 300 Mhz or by 20 to 500 Mhz. The PS-170 divides by ten to 300 Mhz. Price PS 510 \$230, PS 502 \$150, PS 170 \$60.

Micro-Z Co., Box 2426 Rolling Hills, California 90274.

2. 432 Mhz Beam Antenna: VHF Communications type 70/MBM 46 is a 20 Db gain 46 element beam broadbanded to cover the 420-450 Mhz range. Length is 104" and weight is 6 pounds. Price \$52.50.

VHF Communications East, 915 N. Main Street, Jamestown, N.Y. 14701.

3. VHF FM Power Amplifiers: KLM Electronics now has a line of 6-146 Mhz solid state power amplifiers with outputs up to 140 watts, with 1 watt input. A unit for 220 Mhz and two for 432 Mhz are also available, with outputs of 60 and 30 watts in that order. Prices \$40 - \$200. KLM Electronics, 1600 Deck Street, San Martin, California 95046.

NOTICE: If you have SSB capability please check-in to the East Coast VHF SSB Association Net on Sunday mornings at 11 A.M. on 50.175 Mhz. The net control stations rotate to WA2SAZ, WA2CVF, K2EGH and WA3AXV

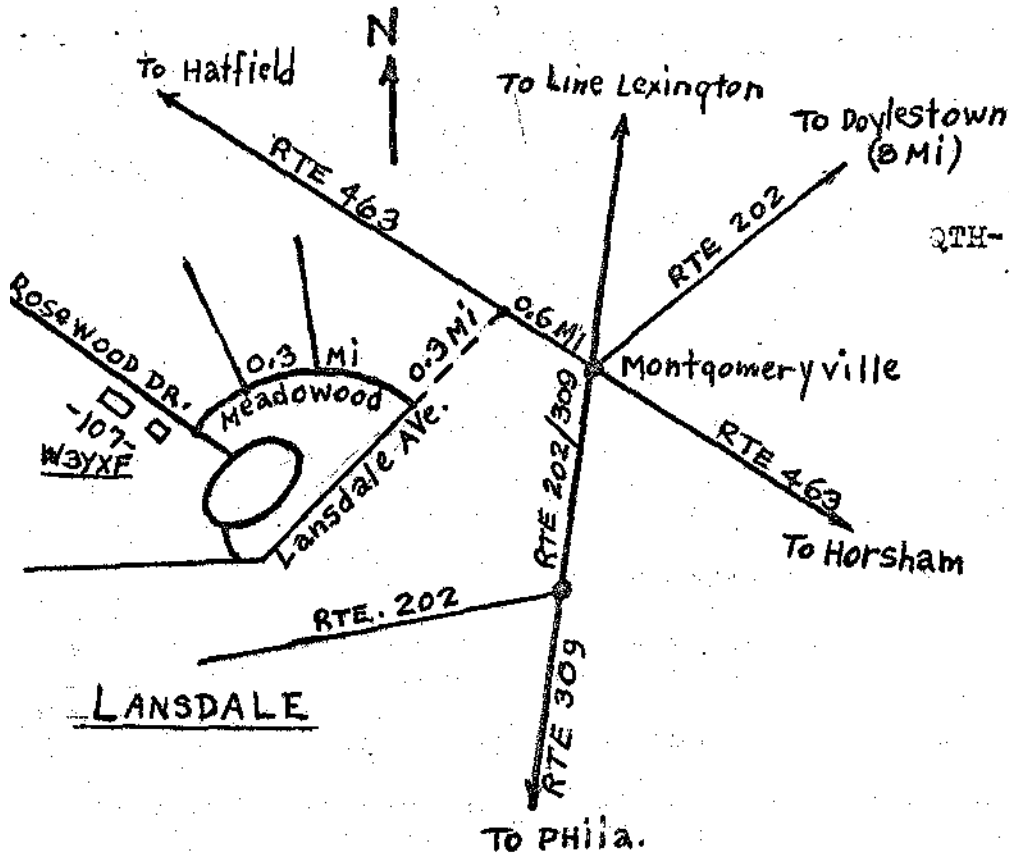
OFFICIAL BULLETIN NR. 439 FROM ARRL HEADQUARTERS NEWINGTON, CONN. AUGUST 16, 1973 TO ALL RADIO AMATEURS BT

FCC has proposed in Docket 19759 that the frequencies 224-225 MHz be withdrawn from the amateur service to create an additional citizens radio service to be called Class E; the present Class D service at 27 MHz would continue in operation as well. The full text of the proposal appears in August QST beginning on page 88. Comment from individual amateurs and radio clubs may be filed with the Secretary, FCC, Washington, DC 20554 on or before Sept. 20. Formal participation requires an original and 14 copies; in many communities photo copy machines are available in public libraries. As has been earlier reported by bulletin from this station, the ARRL Board of Directors has taken a stand strongly opposing the removal of the 224-225 MHz frequencies from the amateur allocation and has urged the filing of comments by individual amateurs as well. AR

OFFICIAL BULLETIN NR 440 FROM ARRL HEADQUARTERS NEWINGTON, CONN. AUG. 23, 1973,

TO ALL RADIO AMATEURS BT: At the July ARRL Board Meeting, plans were finalized for the establishment of an Emergency Communications Advisory Committee.

Membership is composed of W2URP W3PST W4IYT K5SVD W6INI W7IEU W8ERD W9QBH W0P8 VE3DV with WA4PBC as chairman. Correspondence relating to emergency communications may be directed to the committee or to ARRL Headquarters for forwarding. As with the other ARRL advisory committees in the fields of contests, DX and repeaters, the new ECAC provides an additional opportunity for membership input. AR



WHITE ELEPHANT SALE

September 19, 1973 - 8PM

QTH- Joe Rushton, W3YXF
 107 Rosewood Dr.
 Lansdale, Pa.
 215-855-7799

From Willow Grove- Rt.63 to
 Rt. 309- Montgomeryville

From Phila.-309 Expressway
 to Montgomeryville.

From Doylestown- Rt. 202
 to Montgomeryville.

From Norristown- Rt.202
 to Montgomeryville.

Tid Bits (Cont'd)

Congratulations to George, WA3DNC and Lois his bride-to-be. They will be married on Sept. 8th in Pennsburg, Pa. George has his pilots license and they are going on a flying honeymoon across the USA.

W2EIF worked WLYPW in Maine on 1296 Tuesday, Aug. 21, 1973 at 9PM -- thats a 318 mile haul. Pretty FB for 15 Watts from Stratford, N.J.

Here is a new telephone number listing for Bill Murphy, K3ZSG, 215-272-0558.

Refer to page 7 of this issue in connection with ARRL OB NR 439, the following information was received. The members of the club are urged to make the suggested observations and report to the Communication Mgr. ARRL as noted below.

Aug. 24, 1973

All Official Observers:

In connection with our previous request to monitor CRS bands, please also, if possible, monitor areas adjacent to CRS bands for illegal CB activity therein, and include any such in your reports. The following frequency segments are assigned as indicated, and CB activity therein is illegal: 25.02-25.32 MHz (Petroleum); 27.235-27.275 (Industrial); 27.29-27.37 (Special Industrial); 27.39-27.53 (Business).

ARRL has requested extension of time which, if granted, will give us more leeway, 73.



George Hart, W1NJM
 Comm. Mgr., ARRL

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



AD
MANAGER
K3MMW

ADS

<p>NE 7-8328</p> <p>GEORGE S. VAN DYKE, JR., P.E. CONSULTING ENGINEER</p> <p>W3HK</p> <p>4607 CONVENT LANE PHILA., PA. 19114</p>	<p></p> <p>AMERICAN RADIO RELAY LEAGUE, Inc. HARRY A. McCONAGHY, W3SW/W3EPC DIRECTOR, ATLANTIC DIVISION, ARRL</p> <p>"Conife-Mac"</p>	
<p></p> <p>PHIL THEIS Clegg Div. General Manager K3TUF</p> <p>ISC 3050 Hempland Road Lancaster, Pennsylvania 17601</p> <p>TEL: (717) 299-3671 TELEX: 24-8438 CABLE: INTERSIG</p>	<p>1215-707-9052</p> <p>HARRY B. STEIN ASSOCIATES COMMUNICATIONS CONSULTANTS</p> <p>HARRY B. STEIN</p> <p>2007 PARKDALE AVE. GLENSIDE, PA. 19038</p>	
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SWAP SHOP

For Sale:

Hammarlund HQ-150 Receiver,
General Coverage, .54 to 31 Mhz.
Calibrated Band Spread 80-10 Meters.
Built in Q multiplier & crystal
calibrator. Good condition. \$95.00
Contact: Ric Janssen, WN3UDS
143 Fairhill Drive
Churchville, Pa.
215-355-1980 after 8 P.M.

For Sale:

Heath HW-101 -- 80-10 meters CW, SSB
HP-23P A.C. Power Supply; HP 13B Mobile
Power Supply; 1 Microphone - 1-HS24 speaker
\$330.00
Contact: Ben Ginsberg, WA3JSR
215 - 615-3894

Wanted:

Folding base section for Rohn 25
Tower.
Contact: Harry Brown, WA3NGK
215 - 584-4846

September 8 - 9 VHF QSO Party (See VHF/UHF Report)

October 3 - ENTIRE HAMARAMA COMMITTEE MEETS AT W3ZD 8 P.M. FOR FINAL WRAP-UP.

For Sale:

Clegg Thor 6 meter
Transceiver with following
accessories: CM-40 Fillmore Mike
8" exterior speaker, matching out-
board A.C. power supply. Excellent
condition, reasonably priced.
Contact: Alfred G. Hook, WB2ICJ
177 Forrest Drive
Bellmawr, N.J. 08030
609 - 931-2689

For Sale:

Hallicrafters SR42
and SR46 2 and 6 meter transceivers
microphones included. Mint
condition. Outstanding performance
Contact: Richard Sombenedette,
WA3AOP
8015 Walker Street
Phila., Pa.
215 MA 4-8190



215 885-2140

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HAMARAMA

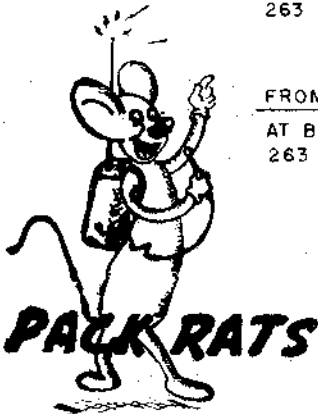
SUNDAY OCTOBER 7, 1973 10 AM TO 4:30 RAIN OR SHINE

WARWICK FIRE COMPANY JAMISON, PA.

ROUTE 263 10 MILES NORTH OF WILLOW GROVE, PA.

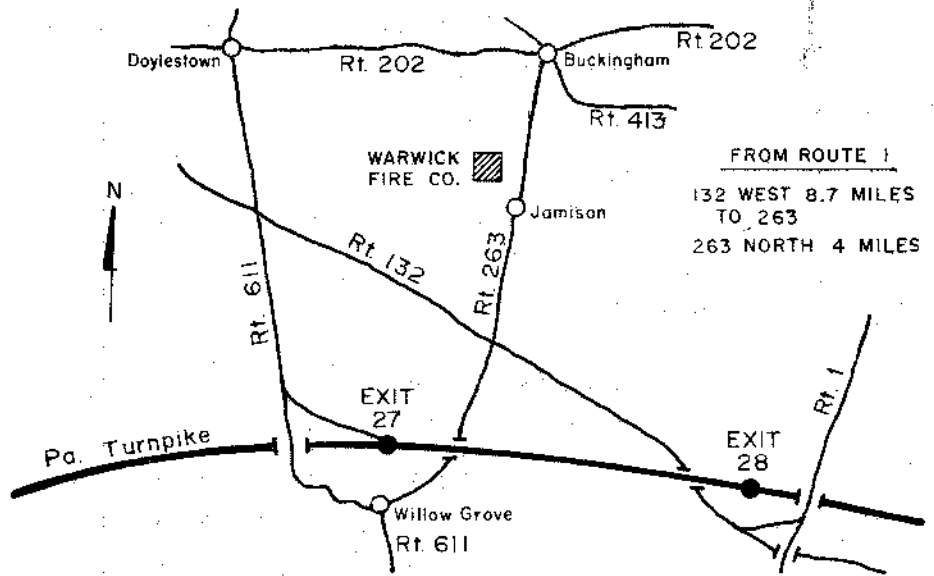
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PHONE 215 675 4539

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Technical Symposium

14 September 1973

2:00 - 5:00 P.M.

7:30 - 10:30 P.M.

SPACE COMMUNICATIONS

1400-1700

George Jacobs, W3ASK, Moderator

John Fox, WØLER and Ron Dunbar, WØMJS

Inverted Doppler Effect

Larry Kayser, VE3QB

System Multiplexing Amateur Radio Telecommanding

Allen Katz, K2UYH

432 MHz Moonbounce Communications

Tom McMullen, W1SL

A Simple Ground Station for Amateur Satellite Work

Richard Knadle, W2RIW

21 Centimeters and Down

1930-2130

Ray Spence, W4QAW, Moderator

Peter E. Cleall, G8AFN

The Challenge of Oscar

Karl Meinzer, DJ4ZC and Jan King, W3GEY

Orbit Consideration for Future Oscar Satellites

Raphael Soifer, K2QBW

Frequency Planning for Amateur Satellites

Perry Klein, K3JTE

Communications Experiments for Oscar Satellites

Jan King, W3GEY and Joe Kasser, G3ZCZ

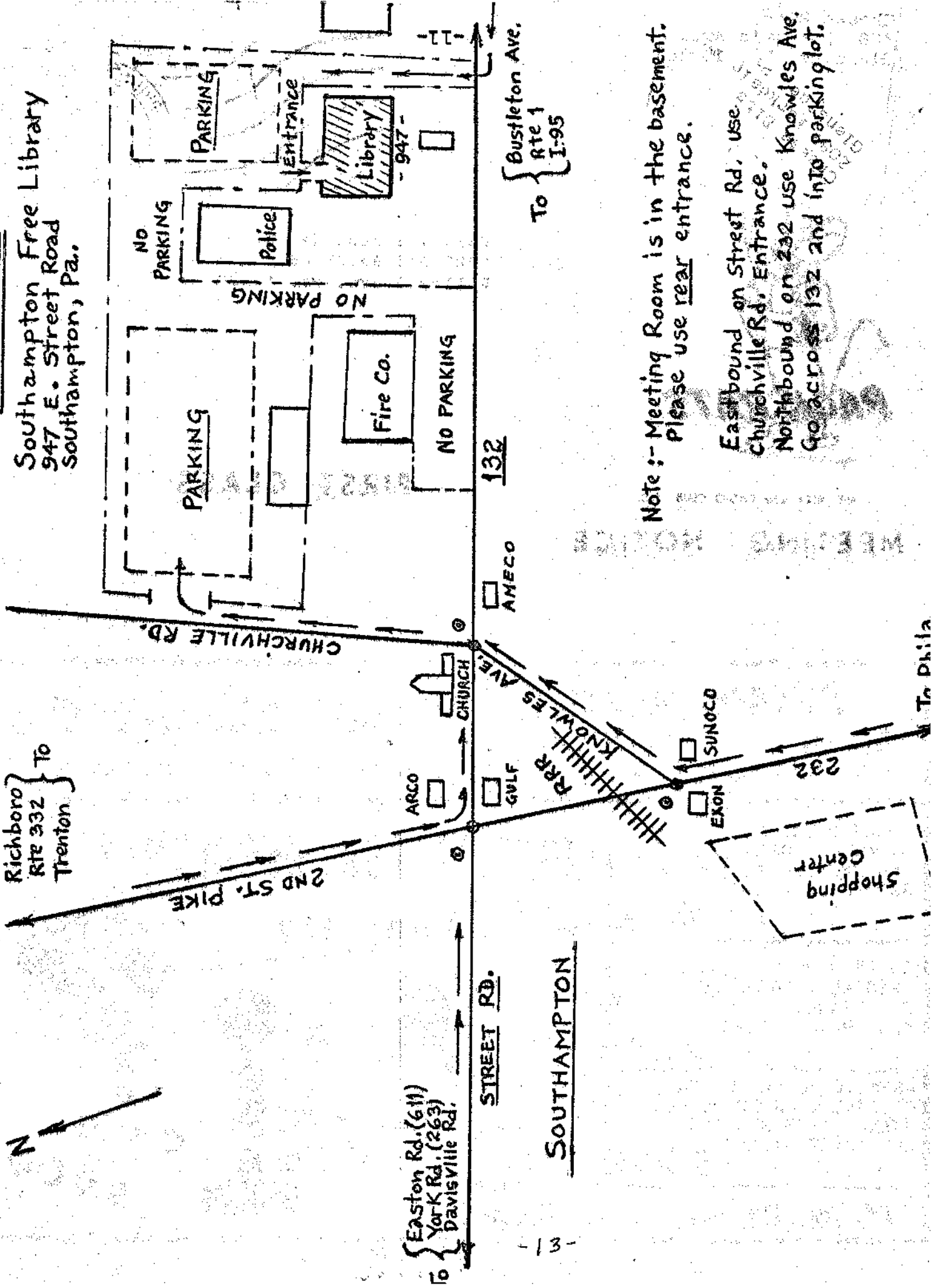
Oscar 7 and its Capabilities

2130-2230

Panel Session

MT. AIRY VHF RADIO CLUB, INC.
MEETING HALL

Southampton Free Library
947 E. Street Road
Southampton, Pa.



Note :- Meeting Room is in the basement.
Please use rear entrance.

Eastbound on Street Rd. use
Churchville Rd. Entrance.
Northbound on 232 use Knowles Ave.
Go across 132 and into parking lot.

Bustleton Ave.
To
Rte 1
I-95

Richboro
Rte 332
To
Trenton

Easton Rd. (611)
York Rd. (263)
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STREET RD.

SOUTHAMPTON

132

Shopping Center

232

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Cheese Bits
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 Glenside, Pa. 19038

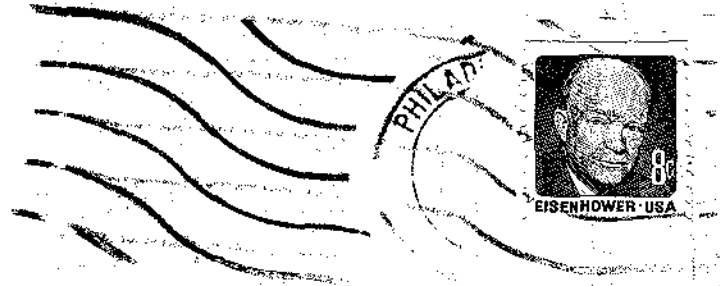


MT. AIRY VHF RADIO CLUB, INC.

MEETING NOTICE

FIRST CLASS

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



STORE HOURS

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

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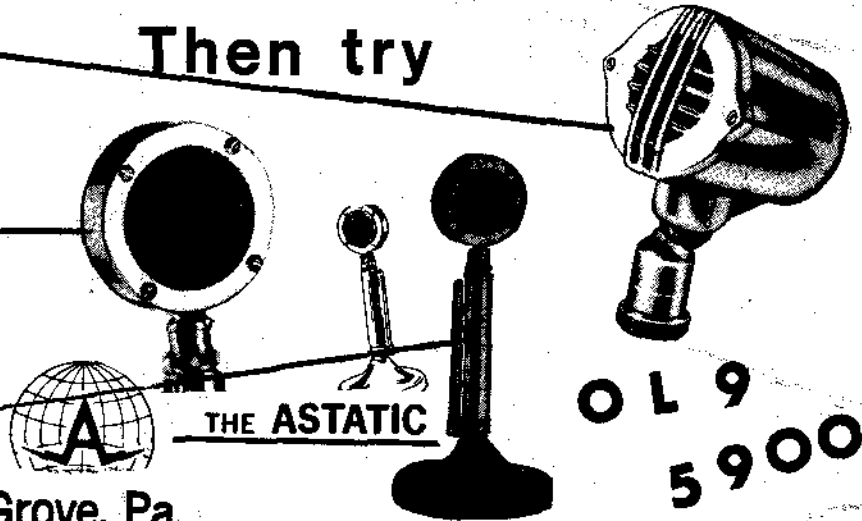
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