

PACK RATS'



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

CHEESE

BITS



MT. AIRY VHF RADIO CLUB, INC., PHILADELPHIA, PA.

50.125, 144.150, 432.110, 1296.025 MHz, W3CCX - Repeater 222.98/224.58 MHz

Affiliated Club: AMERICAN RADIO RELAY LEAGUE

Meetings: Third Thursday of each month at 8:00 P.M.

Southampton Free Library, 947 E. Street Road

Southampton, Pennsylvania 19866

ARNS

VOLUME XXIV

OCTOBER, 1982

NUMBER 10

THE VICE-PREZ SEZ

John Tate, K3KTY, our President has been assigned duties by his company which has taken him out of town for a few weeks. We understand that this will be temporary, and John will be back at the helm next month.

Everybody who was present at our September meeting witnessed an exciting presentation by John Fisher, K2JF, on TVI and RFI. Nobody took a nap during that presentation, I guarantee you! Great job John! We thank you for taking time out of your busy schedule to share your ideas on such an interesting topic.

Plans for the Mid-Atlantic VHF Conference and our Annual Hamarama indicate that the "Pack" has been busy. Looks like another outstanding list of events. Congratulations and thanks to Dave, W3ZD (VHF Conference Chairman) and to Lee, K3MXM (Hamarama Chairman). Our January VHF Sweepstakes Contest Chairman is Phil, WA3NUF - Congratulations Phil; we know that all of the Pack-Rats will give you 100% support. It is time now to begin preparing for the Contest. Let's take advantage of the beautiful weather and get those antenna repairs done. Think of those important additions to our stations - another band maybe? If you need help, say so! It takes a team effort to make this #23 in a row.

Our program for October's meeting will feature a presentation on the first South American Moon-Bounce DXpedition. Remember, the Pack-Rats were there! Attendance at our September meeting was great, let's make October attendance even better.

Thanks to all for your support and assistance during our presidents absence.

73, Bill, WA2DPU

* * *

PROPOSED CONSTITUTIONAL AMENDMENTS PASSED AT THE SEPTEMBER MEETING

1. ARTICLE VIII MEETINGS, add section 5 as follows: (5) Business considered. - Decisions or business requiring the attention of the Board of Directors or the general membership shall only be made at a regular or special meeting where proper notification of the meeting has been made. Notification of special meetings shall include the reason for the meeting, and shall be made to all members of the board or the general membership as applicable.

2. ARTICLE II OBJECTS, revise as follows: In title and heading, change "Objects" to "Objectives".

3. ARTICLE III MEMBERSHIP, section 1, revise as follows: Change "Objects" to "Objectives"

Pack Rats CHEESE BITS is a publication of
THE MT. AIRY VHF RADIO CLUB, INC.
Philadelphia, Pa. and is published monthly.

SUBSCRIPTION RATE - \$2.50 PER YEAR

We operate on an exchange basis with other
publications. Anything that is printed in
CHEESE BITS may be reprinted, unless other-
wise stated, provided that proper credit
is given.

SWAP SHOP ITEMS - NO CHARGE

DEADLINE FOR ARTICLES IS THE GENERAL
MEMBERSHIP MEETING: THE THIRD THURSDAY
OF THE MONTH

EDITOR:

W3CL, HARRY B. STEIN
2087 Parkdale Avenue
Glenside, Pa. 19038
215-887-5052

PUBLISHER/SUBSCRIPTION MANAGER:

K3GAS, DOC CUTLER
7815 New Second Street
Elkins Park, Pa. 19117
215-635-1078

PRINTER:

WB2VLA, DAVID POWER
609-882-1040

TYPIST:

WA3TEM, MARSHA LISSAUER

TRUSTEE OF CLUB CALL W3CCX

WA3AXV, RONALD WHITSEL
215-355-5730

AWARDS CHAIRMAN:

W2EIF, JOSEPH KILGORE
609-783-9478

CLUB HISTORIAN:

W3CL, HARRY B. STEIN

<u>MONDAY NIGHT NETS</u>	<u>NET CONTROL</u>
7:30 PM - 50.125 MHZ	W3CL
8:00 PM - 144.150 MHZ	W2EIF
8:30 PM - 222.98/224.58	K3GAS
9:00 PM - 432.1 MHZ	K3IUU-WA2DPU
9:30 PM - 1296.025 MHZ	W3CXU

PACK RAT REPEATER 222.98/224.58 MHZ
LOCATED IN CHURCHVILLE, PA.

OFFICERS: 1982-1983

PRESIDENT: K3KTY, JOHN TATE
VICE-PRES: WA2DPU, BILL SMITH
COR. SECY: W3ZD, DAVE ZIMMERMAN
REC. SECY: W3NSI, LYN ROWLAND
TREASURER: K3GAS, DOC CUTLER
DIRECTORS: W3IIT, HARRY BROWN
WB2RVX, MIKE GALLO (2 yrs)
WB2VLA, DAVE POWER (2 yrs)
WA3JUF, DAVE MASCARO (1 yr)
WA3NUF, PHIL MIGUELEZ (1 yr)

FREE ESTIMATES
(215) 672-3850
(215) 822-0808



MICHAEL McMACKIN

REGISTERED PLUMBING & HEATING
BATHROOM INSTALLATIONS • ELECTRIC DRAIN CLEANING

96 HELLBERG AVE.
CHALFONT, PA. 18914

2405 PARKSIDE AVE.
HATBORO, PA. 19040

1-302-478-2757

**AMATEUR
and
ADVANCED
COMMUNICATIONS**



G. B. WALLS

3208 CONCORD PIKE (RT. 202)
WILMINGTON, DEL. 19808



**Pennsylvania Institute
of Technology**

PAUL D. MERCADO

Chairperson, Drafting Design Department

(215) 352-7100
(215) 528-6998

414 SANSOM STREET
UPPER DARBY, PA. 19082

Amateur Radio Equipment
Sales & Service

(609) 386-2348

D.P.U. ENTERPRISES

Antennas • VHF Amplifiers • Accessories
KLM **MIRAGE**

Bill Smith
WA2DPU

47 Langdon Road
Burlington, NJ 08016

CALENDAR OF COMING EVENTS
Syllabus by Lee, K3MXM

OCTOBER

Has the same kind of problem September has. It derives its name from OCTO meaning eight. It was the 8th month on the primitive Roman calendar, and we've just never gotten the whole mess straightened out....

- 2 VHF Conference - Warrington Motor Lodge, Warrington, Pa. An all day seminar conducted by leading experts in their field.
- 3 HAMARAMA - Bucks County Drive-In Theatre, Warrington, Pa. The biggest and BEST flea market in the Delaware Valley and beyond. Come out - join the fun - give your hour of support to the club. OUR BIG DAY!!!
- 9 Fire Prevention Day
- 9-10 ARRL Virginia State Convention and Hamfest - Norfolk, Virginia
- 9-10 EME Contest
- 10 CARA Hamfest - Howard County Fairgrounds, Maryland
- 10 Bergen ARC Hamfest - Bergen Community College, Paramus, N.J.
- 11 Columbus Day Celebrated
- 14 Board of Directors Meeting - QTH - K3GAS, Doc Cutler, 7518 New Second Street, Elkins Park, Pa. Directors and interested parties always welcomed.
- 16-17 Jamboree on the Air - World Scout Bureau, all bands, give the Scouts a contact!
- 20 MacArthur landed in the Phillipines "I have returned..." 1944
- 21 First Radio Transmission across the Atlantic 1915
- 21 General Club Meeting - Southampton Free Library, Street Road, Southampton, Pa. TOPIC: K3JJZ, El Weisman will present the famous Pack-Rat EME DXpedition to Columbia, SA. An open meeting to all members and their friends. Bring along a new prospective member. Refreshments, Mario's Raffle, Frankie's Silent Auction.
- 24 Phila. William Penn Radio Birthday Party - Special event station conducted by the Holmesburg Radio Club will operate from Penn's Landing and operate on all bands including their club repeater 146.685.
- 24-30 Amateur Radio Week in Philadelphia, Pa.
- 28 Statute of Liberty unveiled by President Cleveland 1886
- 30-31 ARRL Hudson Division Convention and Hamfest - Great Gorge, McAfee, N.J.
- 31 B-O-O-O its HALLOWEEN.....The goblins will getcha if you don't have lotsa goodies for the kiddies.....

NEW PRODUCTS OF INTEREST TO HAMS

By Lyn, W3NSI

1. OUTDOOR ACTIVE RECEIVING ANTENNA: MFJ has come out with a remote receiving antenna and preamp unit which may be used from 50 KHz to 30 MHz. The MFJ 1024 has a high dynamic range RF amplifier located at the remote antenna. The whip antenna is 54" high and the system acts as a long wire at low frequencies, and at high frequencies the preamp provides high gain. Control box has a gain control, a switch to select either of two receivers, a 20 DB attenuator, and an on-off switch. Unit operates from 12 VDC or 110 VAC adaptor. Price \$130
2. DENTRON MINI TRANSCEIVER: The new MLX units can be purchased for any one band 160-6 meters. Unit is only 5x7x2 1/2 inches and features 12 VDC operation and a 4 digit LED readout. Power is rated at 25 watts SSB/CW. This item could be interesting to VHF hams needing an HF 10 meter rig to go with VHF transverters. Price \$230.
3. DENTRON CW STATION: The Dentron station one covers the 80-40-15 meter bands (full coverage) and operates CW only. Power is rated at 25 watts. Station One uses a 4 digit readout and operates on 12 VDC. Receiver is direct conversion. Designed to be used by a novice or as a back up rig for experienced hams, the rig comes with everything needed to get on the air. This includes: Key, 3 band dipole, headset, logbook, ARRL license manual and radio and code course on cassette tape. Optional accessories include a matching antenna tuner, power supply for AC operation, and a linear amplifier. Price \$200. 1605 Commerce Dr., Stow, Ohio 44224

* * *

VHF/UHF REPORT

By Joe, W2EIF

The VHF bands have not been very active lately - there have been a few auroras and some tropo to the Midwest. The most action occurred over the September Contest Weekend which to this writer did not seem to have the action of previous tests. Maybe the tremendous June Contest just made it seem that way. The band conditions were not as good as in June, but none the less were good. Signals were tremendous from the South and was especially appreciated on 1296 where VA stations were very strong. It was possible to work the Carolinas to Ohio to Ontario and to Maine even on 432. There was aurora both Sat. and Sun., but not very intensive. Exception Six meters. Signals seemed for the most part (in this area) to be confined to VE1, VE2, VE3, New England or W. N.Y. and W. Pa.

* * *

WEATHER WATCH PROPOSED FOR PENNSYLVANIA AND NEW JERSEY

The National Weather Service at Allentown, Pa. issues severe thunderstorm watches or warnings for Eastern Pennsylvania and Northwest New Jersey. This includes Lehigh, Northampton, Carbon, Monroe and Pike Counties in Pa., Warren and Hunterdon Counties in New Jersey. In the near future two more counties will be picked up in Pa. and one in New Jersey.

Charles Giannetta, WA3RSQ who works for the National Weather Service plans to organize a group of hams in these counties to assist during severe weather by participating in a net on 50.150 MHz SSB on Sunday mornings - 9:30 A.M. He would like get started in October. He may be reached at the office: 215-266-1552; at home: 215-837-6124 or on 50.110 MHz. (Thanks - N3BBI)

* * *

ARRL BULLETIN NR 67 FROM ARRL HEADQUARTERS NEWINGTON CT AUGUST 12, 1982 TO ALL RADIO AMATEURS BT: Attention repeater enthusiasts. The deadline for registering your repeater for the next edition of the ARRL Repeater Directory is Nov. 1, 1982. Please register your repeater on form CD 240, available for an s.a.s.e., to insure the accuracy of the new edition. Send all information to ARRL Communications Dept., 225 Main St., Newington, CT. 06111 AR.

SWAP SHOP

WANTED: 220 FM Transceiver.

CONTACT: K2DLJ, Monty Shaites
Phone: 201-658-3741

FOR SALE: Polaroid 3000 speed black & white film type 107 - \$1/pk. 8 track players, phonographs, speakers, audio cables, meters. 2 disco infinity lights - \$20 ea. Color organs - sound actuated - \$12 ea. 150 watt, 130V bulbs - \$1 ea. 1/4" recording tapes (new). New records and 8 track tapes.

CONTACT: Doc, K3GAS
Phone: 215-635-1078

FOR SALE OR SWAP: Brand new Unarco/Rohn 48' self support tower HDBX48 - complete, ready to put in ground (Spec. 18' wind loading) Cost \$450. Will swap for 220 transverter or low band transceiver.

CONTACT: K3KTY, John Tate
Phone: 215-670-2488 - Sat. or Sunday

JOB OPENINGS: The Montgomery County (Pa.) Communications Dept. is in need of a Radio Technician. Applicants should be Technical School Graduates. Field experience and a second class F.C.C. License are desirable. For further info. contact Tom Gibson or Bob Detwiler at 215-631-5105. We also are looking for someone to work part time wiring console equipment. This could be an ideal spot for a retired ham who wants to pick up a few extra bucks!

* * *

Visitors September 16, 1982 Meeting

KA2NYF - Janet, Deptford, New Jersey
K2JF - John, Pitman, New Jersey
KA3JVC - Kenn, Riegelsville, Pennsylvania

* * *

TID BITS

Sun watcher W2AXU, Jack Power, reports the Sunspot No. for August 1982 = 105.9. Smoothed No. for February 1982 = 132.9.

Congratulations to Phil Miguez, WA3NUF on his appointment as Chairman for 1983 Jan. VHF SS. You will be hearing more from him soon.

John Tate, K3KTY our Prez is away on business, but expects to be returning to Sinking Spring in the near future.

Bill Smith, WA2DPU, chaired the Board and September meeting in fine style.

Welcome back to Carl Croce, K3DLS, Paul Capone, WB3CTP, Joe Gardocki, K3NHX and Dick Boyle, K3IGX. How can we forget Ralph Alexander, WA3FOF.

Business has carried our West Coast Rep. Steve Simons, WA3WAS to Tokyo and Hong Kong - if you can't work them, visit them (Tnx WA3NUF)

Cris Imlay, N3AKD reports in the minutes of the ARRL Executive Committee Meeting, No. 402 of September 11, 1982: "4.1) In the Bynum (WB2SZK) case, at its Nov. 21, 1981, meeting the Committee had voted to provide financial support in the event the Supreme Court of New Jersey accepted certification (i.e., agreed to hear) the case on appeal. This decision is still pending."

* * *

PENNARC LOOKING FOR HELP

Ralph Alexander, WA3FOF, President of PennArc invites Pack-Rats who might be interested in supporting the club by helping to teach new amateurs. The club has an ideal location at the Montgomery County Community College one mile north of Rte 73 on Rte 202. They meet the 4th Tuesday of the month at 8 PM. The next meeting is on October 26, 1982.

SPECIAL EVENTS STATION, W3WP OCTOBER 24, 1982
PHILADELPHIA'S WILLIAM PENN RADIO BIRTHDAY PARTY

The University of Pennsylvania and Holmesburg Amateur Radio Clubs of Philadelphia in conjunction with the City's 300th Birthday Committee, Century IV, will be operating W3WP for twenty four hours from Penn's Landing, Philadelphia, Pa. to celebrate the birthday of the City's founder, William Penn. This event will be an official party of the year long celebration observing the 300th Birthday of Philadelphia. A handsome commemorative QSL card will be sent to all stations making contact with W3WP, the birthday station. All North American and Canadian stations must include a SASE. QSL manager is N3HW, Harry White, 7520 Verree Road, Phila., Pa. 19111.

TIME: Start 0000 GMT, October 24th
End 2359 GMT, October 24th

EXCHANGE: RS(T), City, State, Country, and W3WP log number.

FREQUENCIES: Phone: 3.925, 7.275, 14.290, 21.365, 28.550 plus or minus QRM. Also Holmesburg/ U of P Repeater, two meters, 146.685, (.085) (146.520 SIM)
C.W. Just inside the high end of each cw band.

October 24 thru October 30 will be Amateur Radio Week in Philadelphia proclaimed by Mayor William Green on October 24 at beginning of W3WP event.

* * *

FROM ARRL DIRECTORS LETTER, NO 1790 OF SEPTEMBER 17, 1982

H.R. 3239 BECOMES LAW

On September 13, President Regan signed into law legislation of considerable importance to radio amateurs. The bill, N.R. 3239, incorporated the amateur radio provisions of the bills previously known as S. 929 on the Senate side, and H.R. 5008 on the House side. The two Houses of Congress adopted H.R. 3239 on August 19.

Through the courtesy of the Capitol Hill Amateur Radio Society, we are able to enclose an abridged version of the conference Report on H.R. 3239 which includes the relevant portions of the bill itself. Also enclosed is an FCC staff summary of the provisions of the bill, including the non-amateur provisions.

Now we can break out the champagne!

BURBANK SUIT FILED

A class action complaint against the City of Burbank, Illinois, was filed in U.S. District Court for the Northern District of Illinois on September 10 on behalf of ten amateur and CB operators (and all persons similarly situated) who reside in the city. The suit, filed by Attorney James C. O'Connell, W9WU, seeks the following:

1. A declaration by the Court that Ordinance 9-4-82 and Section 4-295 of the Municipal Code of the City of Burbank and the policy they implement, are unconstitutional abridgements of the plaintiff's rights.
2. An order temporarily restraining, and permanently and preliminarily enjoining, the City of Burbank from enforcing these regulations, from imposing a 35-foot height limitation for amateur and CB antennas, and from refusing to consider applications for permits or variances for amateur or CB antennas.
3. An order temporarily restraining, and permanently and preliminarily enjoining, the City of Burbank from bringing any civil or quasi-criminal action or complaint against anyone erecting or maintaining an amateur or CB antenna.

DIRECTORS LETTER NO. 1790 CONTINUED

4. Recovery of costs and attorneys' fees.
5. The granting of any further relief the Court deems just.

The 38-page document describes the need that radio amateurs have for effective antennas, explains the harmful impact of the regulations the City is trying to impose, and explains the need for temporary injunctions to protect plaintiffs' rights. Filing of the suit was made possible by the pledge of financial support given by the League's Executive Committee on July 9.

CATVI

Briefly, the following has occurred on the Cable Television Interference front:

1. At Cedar Rapids, the Board reaffirmed its view at Minute 73 that vigorous action was required to protect amateur interests in the face of increasing problems of interference either to or from CATV plants.
2. Negotiations with the National Cable Television Association, begun after the filing of ARRL petition RM-4040, have continued; however, a mutually agreeable statement on the CATVI problem has not yet resulted.
3. ARRL Comments supporting its request in RM-4040 that cable systems be prohibited from using amateur frequencies were filed on September 1.
4. NCTA comments opposing the ARRL petition were filed on the same day.
5. Extensive ARRL comments in reply to those of NCTA were prepared for filing on September 15, documenting in considerable detail the extent of the CATVI problem.

We continue to assemble documentation of local problems with cable interference, and are especially interested in cases involving intransigent cable system operators. The ongoing ARRL efforts on the CATVI front have involved close coordination between President Clark, the RFI Task Group (especially its chairman, Director Turnbull), Counsel Imlay, and staff.

* * *

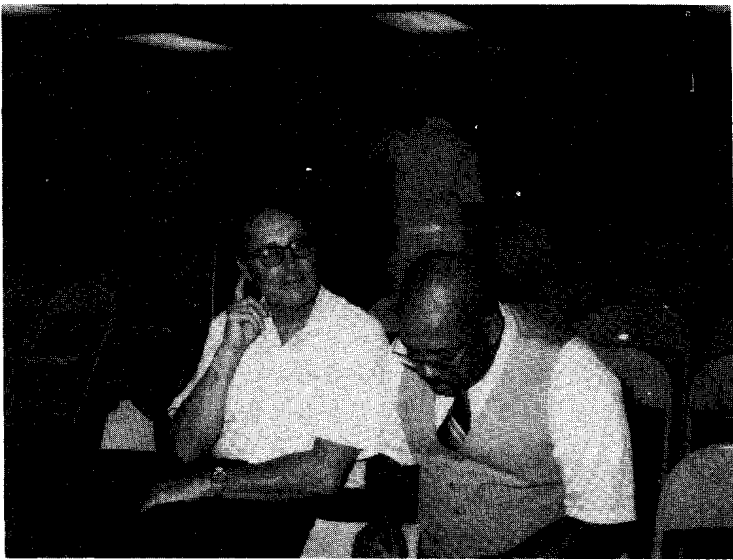
COMMERCIAL AD

Chassis-Kit: Chassis Kit can save the home-brewer dollars, replaceable sides, end and top plates. Any size to 17" square of .040 aluminum. For quotes on other size send SASE.

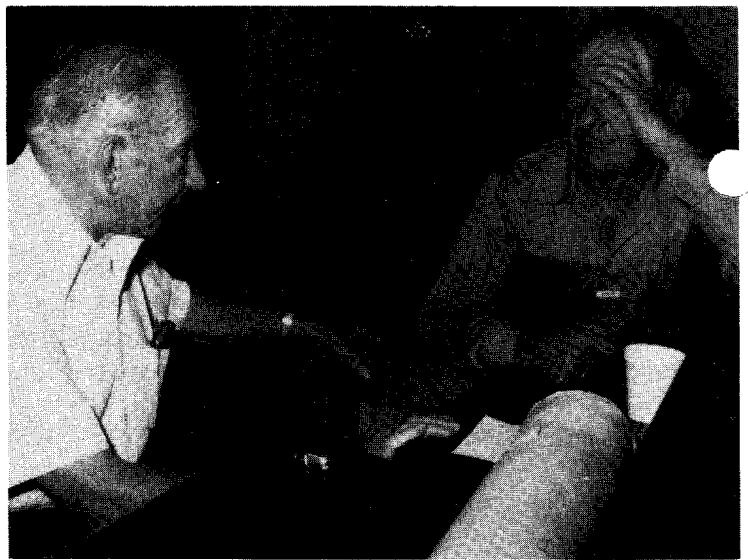
<u>Chassis-Kit</u>	<u>Bottom Plate</u>	<u>Chassis-Kit</u>	<u>Bottom Plate</u>
3x3x2 - \$2.25	\$.65	4x8x3 - \$3.75	\$1.80
3x4x2 - 2.50	.75	5x9x3 - 4.00	1.85
4x6x2 - 3.00	1.35	8x12x3 - 5.00	3.25
5x5x2 - 3.00	1.50	8x17x3 - 7.00	3.40
7x5x2 - 3.10	1.65	10x12x3 - 7.00	3.50
7x7x2 - 3.25	1.75	10x17x3 - 7.75	3.75

Add \$2.50 for postage & handling for 1st chassis-kit. Add \$.75 for each additional kit. Penna. residents add 6% sales tax. Prices can change without notice. Cabinet kit quote SASE; state size & of front opening. Side plates 20% as of chassis price + \$1.00 P&H for 1st & 50¢ for each additional.

Byers CHASSIS-KIT
5120 Harmony Grove
Dover, Pa. 17315



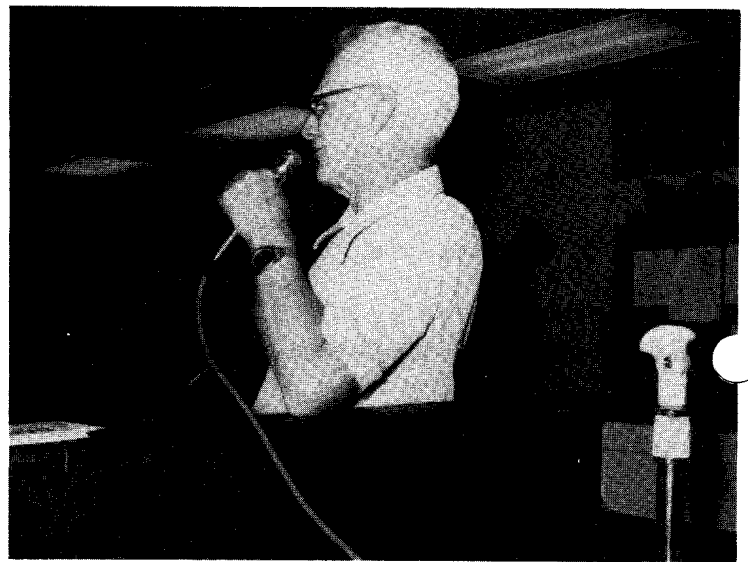
K2JF (Speaker), WA2DPU (Vice Prez)



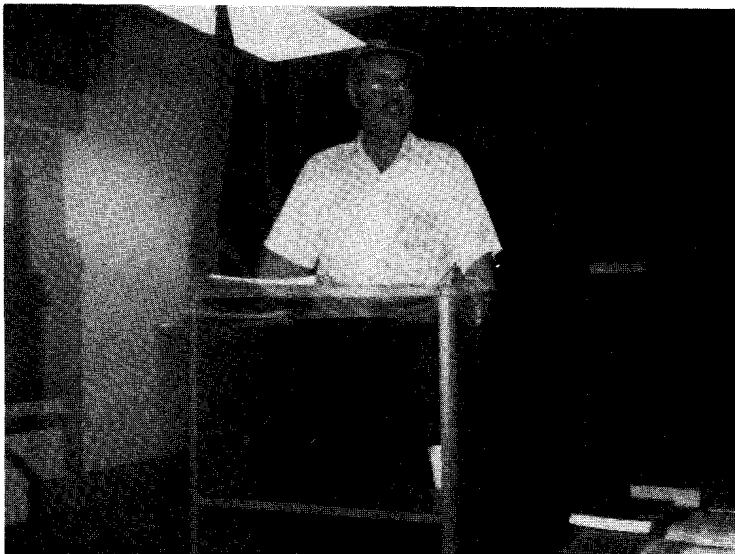
W3CL, W3KKN (Charter Members)



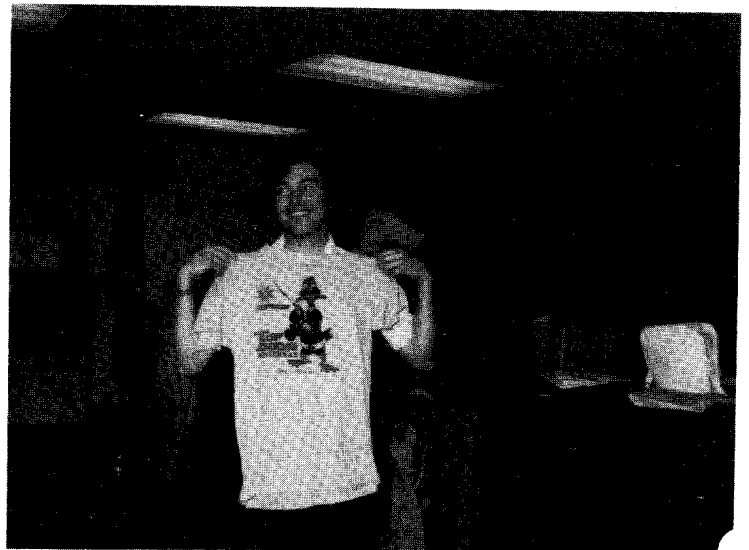
K3DLS (Raffle Sales)



W2EIF (Propagation Update)



K2JF (RFI/TVI Presentation)



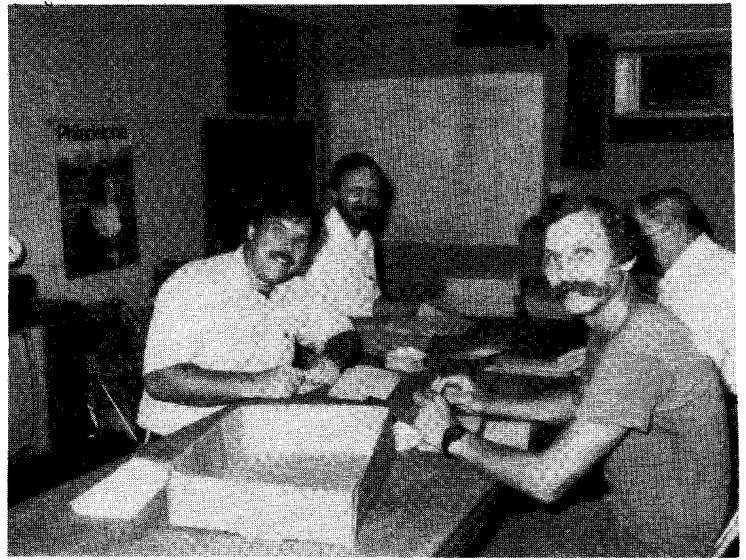
WA3NUF (Chairman Jan. '83 VHF SS)

SEASON STARTS - SEPTEMBER MEETING

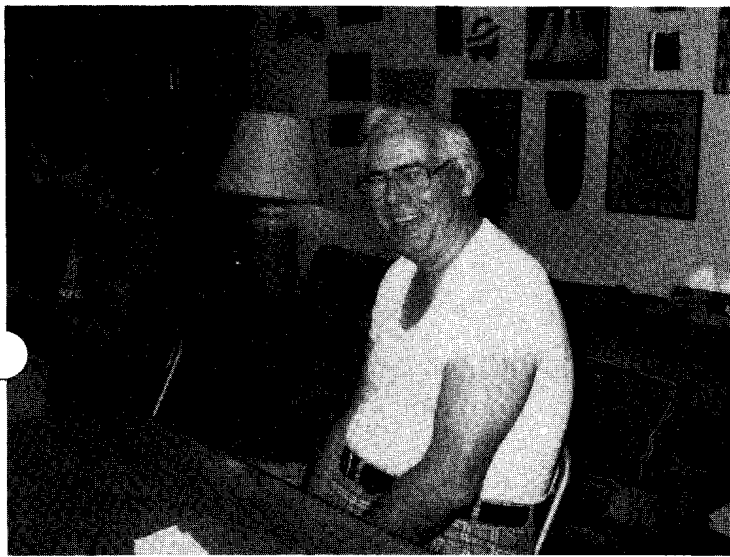
FOTOS BY K3GAS



W3CL, K3MXM, K3ACR (Stickers)



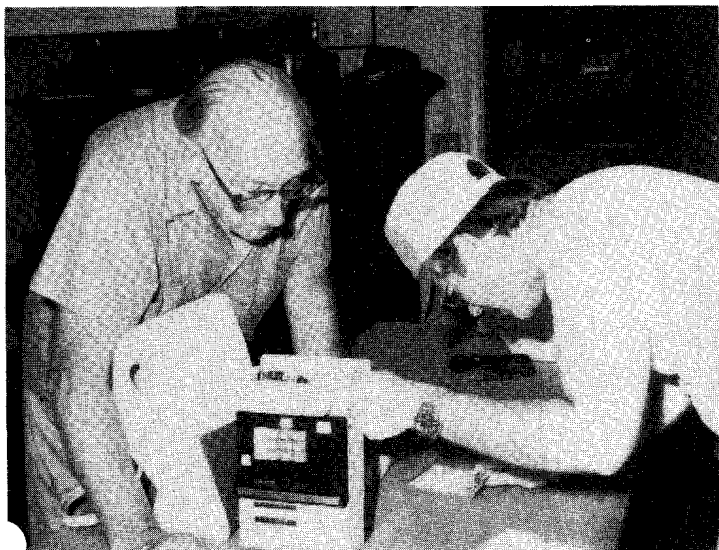
WØRSJ, K3ACR (Lickers) W3IIT, K3VYG (Folders)



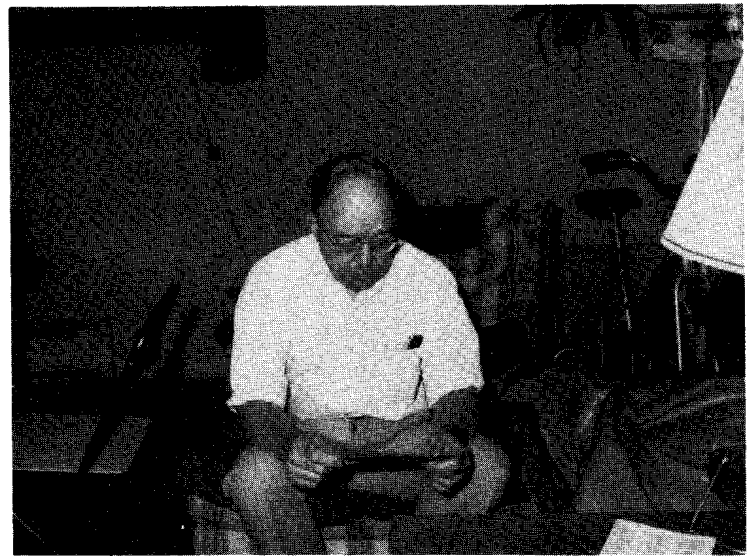
W3ZD (Host)



K3GAS (The Boss)

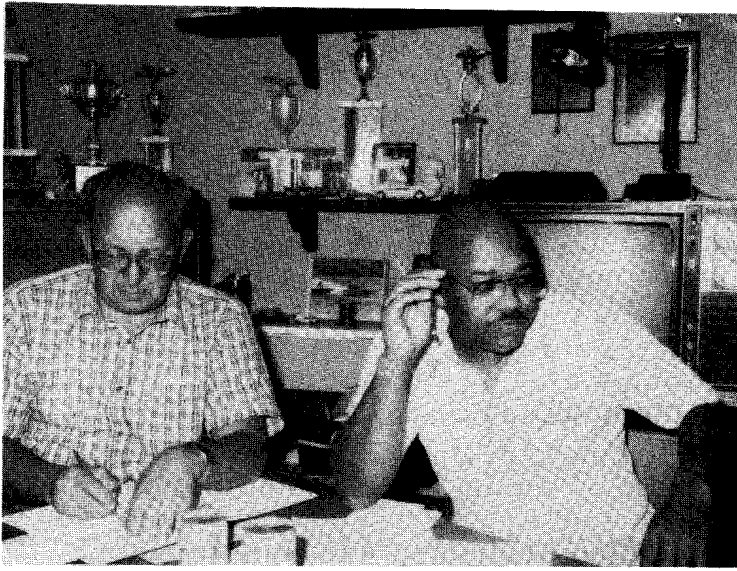


W2AXU, WB2VLA (Stampers)

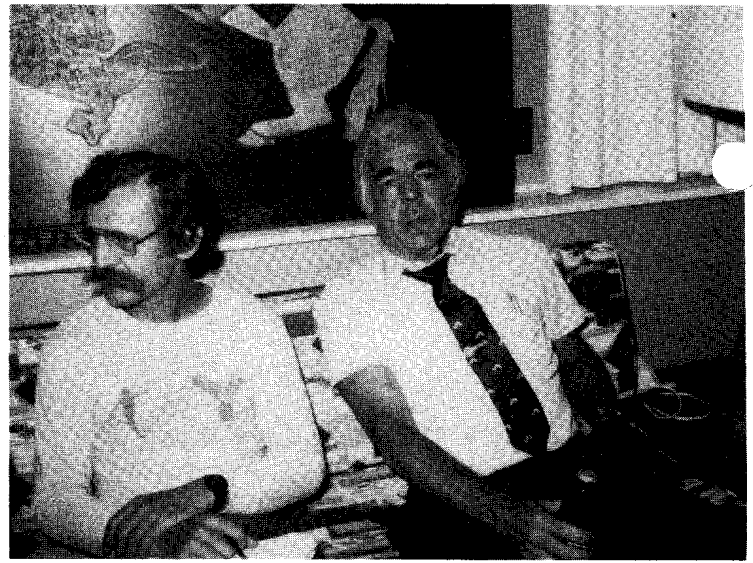


K3VYG (Finished Product Checker)

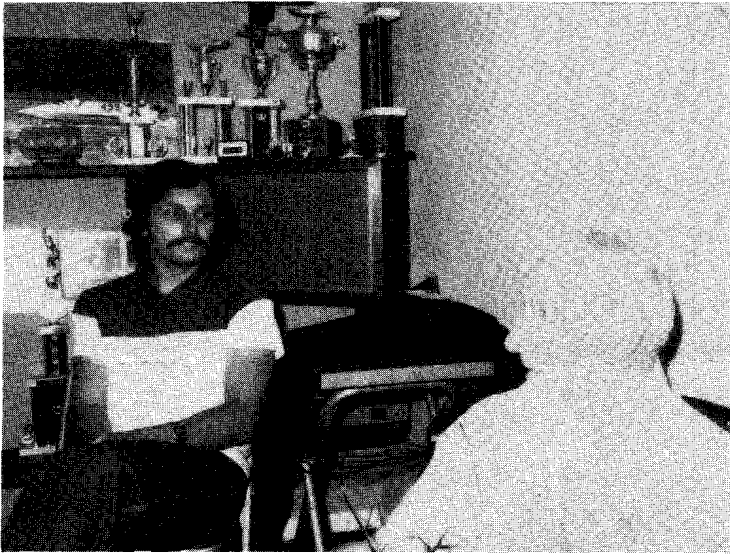
H A M A R A M A L I C K A N D S T I C K



W3NSI (Sec'y), WA2DPU (Vice Prez)



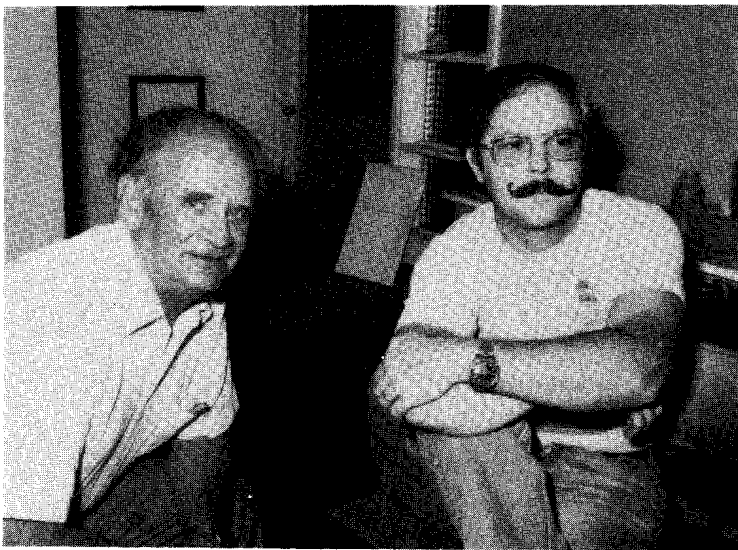
W3IIT (Ex-Officio), K3IUU (Parliamentarian)



WB2RVX (Junior Member), W3CL (Membership)



WA3NUF (Senior Member), K3IGX (Sec'y Emeritus)



K3MXM (Hamarama), WB2VLA (Junior Member)



WA3JUF (Senior Member) W3IIT (Again)

THE BOARD MEETS

215-947-6670

MARKETLINE™

SYSTEMS, INC.
2337 Philmont Avenue
Huntingdon Valley, Pa. 19006

Computers & Peripherals

WB7TCF

**CARL
BARISH**

Printech

13620 N.E. 20TH, BELLEVUE, WA 98005
(206) 746-6000

NE 7-8329

GEORGE S. VAN DYKE, JR., P.E.
CONSULTING ENGINEER

W3HK

4607 CONVENT LANE
PHILA., PA. 19114



AMIL S. GUMULA
PRESIDENT

A. G. RADIO PARTS CO.
939 TOWNSHIP LINE RD.
ELKING PARK, PENNA. 19117
TELEPHONE: 215-886-5100

RCA Authorized
Distributor

K2RPZ PRINT

stu goodman

Distinctive QSLs-Largest selection, lowest prices, top quality photo and completely customized cards. Make your own QSLs truly unique at the same cost as a standard card, and get a better return rate! Free samples, catalogue. Stamps appreciated. Stu, K2RPZ, Box 412, Dept. PR, Rocky Point, NY 11773. (516) 744-6260

AMATEUR
SALES & SERVICE

(215) OL 9-5900

"HAM" BUERGER INC.
Communication Specialists

BOB HERSHMAN
WA3Z1D

68 N. YORK RD.
WILLOW GROVE, PA. 19090

P E N N A R C
A GENERAL PURPOSE CLUB

Monthly meetings the 4th Tuesday-8PM
Montgomery County Community College
340 DeKalb Pike, BlueBell, Pa.

CLUB REPEATER - 223.04/224.64 Mhz

The Ham Radio Publishing Group

hr Greenville, NH 03048 (603) 878-1441

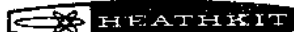
HAM RADIO - the Technical Ham's
Magazine. Ask for a free sample
copy or our Book Catalog.

CALL DOC CUTLER (K3GAS)
FOR YOUR ELECTRONIC NEEDS

NEW, RECONDITIONED, OR AS IS.

LOW PRICES

by appointment 215-635-1078



Norm Richards Manager

Heathkit Electronic Center
6318 Roosevelt Blvd.
Philadelphia, Pennsylvania 19149
(215) 286-0180

a unit of **Vertec Technology**
ELECTRONIC COMPONENTS

TV - RADIO - HAM - CB - STEREO

RICHARD H. PIERCE
ELECTRONIC EQUIPMENT REPAIR
SPECIALIZING IN AMATEUR RADIO EQUIPMENT

K3MWW
(215) 785-0058

2700 NEW FALLS ROAD
NEWPORTVILLE, PA. 19056

BROWSING-THURS. 7⁰⁰-9⁰⁰
SAT. 9⁰⁰-4⁰⁰

Day-Nite (215) 455-2121

FERTIK'S ELECTRONICS

Components & Equipment

LEON FERTIK

5400 ELLA STREET
PHILADELPHIA, PA. 19120

LUNAR KLM ASTRON
MICROWAVE MODULES
LAMA

(717) 868-6565

THE VHF SHOP

BOX 349 R.D. 4
MOUNTAINTOP, PA. 18707

K3MKZ
GERRY

215-PI5-9007

WA3F0F

RALPH ALEXANDER

Electronic Equipment Repair
Technical Writing

(215) 723-1200
(215) 646-2600



CARR ELECTRONICS
AMATEUR RADIO GEAR NEW & USED FOR TODAY'S HAM

JOSEPH J. BURGESS
W3PNL

MAIN & RELIANCE
TELFORD, PA 18969

215-342-5982

WA3HIT

Paul and Betty Rilling
INCOME DIVERSIFICATION

5830 Weymouth Street -Phila., Pa.19120

73 magazine
for radio amateur

73 stresses the fun
of ham radio.

\$25 one year \$53 three years
POB 931 • Farmingdale NY • 11737

HOLMESBURG AMATEUR RADIO CLUB
P.O. Box 6253- Phila.Pa 19136

NOW IS THE TIME TO JOIN
Excellent coverage in Phila &
surrounding area

Initiation: \$20 Dues - \$16/yr.*
* Prorated through year

