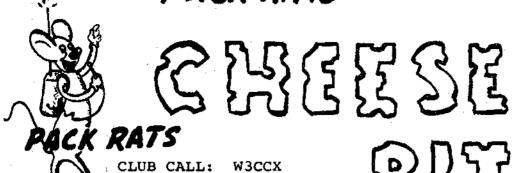
# PACK RATS





AIRY VHF RADIO CLUB, INC.

MT. AIRY VHF RADIO CLUB, INC., PHILADELPHIA, EPNNSYLVANIA 50.125, 144.150, 220.125, 432.110, 1296.110 Mhz, W3CCX - Repeater 222.98/224.58 Mhz Affiliated Club: AMERICAN RADIO RELAY LEAGUE

Third Thursday of each month at 8:00 P.M. Southampton Free Library, 947 E. Street Road Southampton, Pennsylvania 19866

VOLUME XXVI

JUNE 1984

NUMBER 6

#### THE EDITOR SEZ

When the Mt. Airy VHF Radio Club was founded in 1956, I became one of its charter members, and for the past 12 years have served as the editor of this paper - it has been a wonderful experience. This is the first time I have communicated directly with you.

I have watched the club grow in technical skill in the use of the VHF/UHF frequency spect-

rum, and observed it obtain world wide recognition in our operational expertise.

From the beginning we became an affiliate of the ARRL, and have looked upon that organization as the only viable representative of the amateurs in our country and perhaps in the world. I believe that without the ARRL our government and the public would have long ago restricted the amateurs' use of the communication spectrum.

Years ago we established our May meeting as "ARRL NITE" and invited ARRL Headquarters participation; this going back to the days of Ed Tilton, W1HDQ. The Atlantic Division Director always joined us as well. This year we looked forwrd to being presented with the "GAVEL" that evening - number 24 that is. Our president received the following letter from our friend David Sumner, KlZZ:-

Dear Bill:

୍ଦିଆ

I'm sorry we were unable to provide a member of the staff to assist Hugh Turnbull in representing the League at your traditional ARRL night this year. I recall fondly my own savisit a few years ago, when I brought RSGB General Manager David Evans, G30UF, along on our way to Dayton. As you know, I have considerable interest in VHF/UHF weak-signal work myself, but was simply not able to get away to join you. When Hugh renewed the request that we try to find someone from the staff to go down, we tried until the very last minute. I hope we'll be able to do better next year.

sincerely,

David Sumner, K1ZZ General Manager

Hugh Turnbull. W3ABC, our director and a member of the ARRL executive board, addressed the club that evening and covered many areas of concern to all amateurs; the VEC program, volunteer monitoring, and ARRL management policies were among the major topics. He also presented one of our respected old-timers, W3AJF, Horace Deacon with an ARRL 50 year plaque. Contest plaques were also presented to our members by our president Bill Smith, NF2L.

(Continued on Page 7)

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 otherwise 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:

WASTEM, 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

MONDAY NIGHT NETS 7:30 PM - 50.125 MHZ 8:00 PM - 144.150 MHZ 8:30 PM - 222.98/224.58 8:45 PM - 220.125 MHZ 9:00 PM - 432.110 MHZ 9:30 PM - 1296.1 MHZ	NET CONTROL W3CL W2EIF K3GAS WA2DPU-K3GYS K3IUV-WA2DPU W3CXU
---	--

PACK RAT REPEATER 222.98/224.58 MHZ/ W3CCX LOCATED IN CHURCHVILLE. PA.

OFFICERS: 1983-1984

PRESIDENT: WA2DPU, BILL SMITH VICE-PRES: WB2VLA, DAVE POWER COR. SECY: WØRSJ, BILL MURPHY REC. SECY: W3NSI, LYN ROWLAND TREASURER: K3GAS, DOC CUTLER

DIRECTORS: WAZOMY, GARY HITCHNER(2 yrs)
WAZYUE, BRUCE LOSS (2 yrs)

W311T, HARRY BROWN (1 yr) WB2RVX, MIKE GALLO (1 yr)



THE AMERICAN RADIO RELAY LEAGUE

OST

HUGH A. TURNBULL, W3ABC

Director, Atlantic Division

6903 RHODE ISLAND AVE. COLLEGE PARK, MD. 20740

(301) 927-1797

1-302-478-2757

AMATEUR and ADVANCED COMMUNICATIONS Gisele" K3WAJ

G. B. WALLS

3208 CONCORD PIKE (RT. 202) WILMINGTON, DEL. 19803



# Pennsylvania Institute of Technology

PAUL D. MERCADO

Chairperson, Drafting Design Department

(215) 565-7900

Rose Valley-Notre Dame Campus 800 Manchester Ave., Media, Pa. 19063-4098

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

# CALENDAR OF COMING EVENTS Syllabus By Lee, K3MXM

## JUNE

- 1 For all you Star Gazers Marilyn Monroe was born this date in 1928
- 2 Long Island Computer Fair Mellville, N.Y.
- 2-3 N.J. Micro and Computer Flea Market Meadowlands Hilton Hotel, Secaucus, N.J.
- Wilkes-Barre Hamfest 109th Armory Kingston, Pa. (Cross river from W.B.)
- 3 DCARA Hamfest and Auction Drexel Hill Middle School State Rds. and Penn Sts. Drexel Hill, Pa. Talk-In 147.36 and .52
- 3 Manassas Hamfest Manassas, Virginia
- 3 For our Southern Readers Happy Birthday Jeff Davis
- 6 D Day 1944 Does it seem like it was 40 years ago...
- 9-10 June VHF QSO Party (See Note)
  - Jersey Short Ham and Computer Fest Jewish Community Center 100 Grant Ave., Deal, N.J. (Exit 105 Garden State Parkway) Talk-In 147,045
  - 14 FLAG DAY Display our Flag proudly today.
- Board of Directors Meeting QTH W3CL, Harry B. Stein, 2087 Parkdale Avenue, Glenside, Pa. If lost, 887-5052. Directors and interested parties always welcome.
- 15-16-17 Summer SMIRK Party (Six meter International Radio Klub)
- 17 Central Maryland Hamfest Frederick Fair Grounds Frederick, Md.
- 17 Fathers Day (Our Day in the Sun)
- 19 Statue of Liberty Dedicated 1885
- General Club Meeting Southampton Free Library, 8 P.M. Topic #1 Election of Officers for 1984-85 Year; Topic #2 Photos, Reports and Survey of W. Va. Site For UHF Contest in August, W3HQT et al; Topic #3 Amateur Sattelite Communications now and the future-slides, etc. WA3DSP Doug Crompton. Your vote definately counts Come on out and use it. It does count!! The Mario Raffle, Frankie's Silent Auction Refreshments. Bring a friend along. It will be a most interesting evening and meeting.
- 23-24 FIELD DAY Full details May QST Page 101
- 24 First Sighting of "Flying Saucers" 1947
- The Toothbrush invented in China 1498.
- NOTE: June 9 & 10, 1984 VHF QSO PARTY

Steve Simons, KF6AJ now residing in Danbury, Connecticut invites Pack-Rats to come and help assemble the station and operate the contest from WlQK on Mohawk Mountain (North of Danbury and West of Hartford).

# NEW PRODUCTS OF INTEREST TO HAMS By Lyn, W3NSI

- 1. <u>HUSTLER ANTENNAS</u>: Hustler has some new antennas in their line of interest to the VHF population. The G6-440 is a UHF fixed station vertical with 6 DB gain and a bandwidth of 18 MHz. Wind survival is rated at 120 MPH and length is 88 inches. The 6-MB#3 is a three element 6 meter beam with a gain of 6 DB and a weight of 7 lbs. Bandwidth on the beam is 2 MHz for under 2:1 SWR. Price \$100 for the G6-440 \$60 for the 6-MB3.
- 2. A R A PRE-AMPS: Advanced Receiver Research now has a line of GaAsFET in line RF switched pre-amps for 50-144-220 and 432 Mhz. The 6 and 2 meter models SP50VDG and SP144VDG are listed as .55 Db noise figures and 24 Db gain. The 220 and 432 models SP220VDG and SP432VDG are also rated at .55Db noise figure and 20 Db gain on 220 with 16 Db gain on the 432 unit. These in line amps are rated at 25 watts RF and so could be used anywhere in the line and automatically switch the amp out of the circuit during transmit. For higher power operation the preamp would have to be mounted between the transceiver and the high power amp. Price All models \$110.
- 3. MIRAGE 2 AND 220 POWER AMPS: Mirage has some new amps for use with HTs. The high power unit, the B215, covers all mode operation on 2 meters and features 150 watts out with 2 watts in. The smaller units are only  $2 \times 3 \cdot 1/2 \times 7$  inches and look just like the big amps, with 3 switches and 2 led indicators on the front panels. The 2 meter B23A boosts 2 watts to 30 watts out. The 220 unit G22A takes 2 watts in and puts out 20 watts. All three amps have built in preamps that can be switched out of the circuit from the front panel. The small amps also operate all modes.

WHF/UHF REPORT
By Joe, W2EIF

The 50 MHz band has started to open up on schedule. There have been some openings with one providing contacts into the Northwest including Montana and VE's. The 2 meter band seems to have dropped off in activity, however, the nets seem to be holding up as to participation. The 220 Spring Sprint went well, however, the 432 Sprint was poor, possibly because of bad conditions. 1296 was pretty good according to W3HQT who worked 21 stations with 7 grids.

Have not heard anymore about activity from Spruce Knob W. Va. for the month of May. The unusually cold Spring has not produced any good tropo conditions. Lets hope it improves by the JuneQSO Party.

Now that the club is not in the QSO Party, we as individual operators should get on and represent the Club as to activity.

P.S. W2AXU reports the 6 meter band was open May 19 &20 to LU - He worked LU8YYO on the 20th. There were some good contacts made during the 50 MHz Spring Sprint.

### THE FIRST BUG Received From KS2T 5/16/84

It was the summer of 1945. The US Navy was rushing to finish Mark II, the first American large-scale digital computer. "It was a hot summer with no air conditioning, so all the window were open," wrote Navy Captain Grace Hopper in the Annals of the History of Computing. "Mark I stopped, and we were trying to get her going. We finally found the relay that had failed. Inside the relay - and these were large relays - was a moth that had been beaten to death by the relay. We got a pair of tweezers. Very carefully we took the moth out of the relay, put it in the logbook, and put scotch tape over it. Now, Commander Howard Aiken had a habit of coming into the room and saying, 'Are you making any numbers?' From then on if we weren't making any numbers, we told him that we were debugging the computer. To the best of my knowledge that swhere it started." This logbook page with the first computer bug still taped to it, is at the Naval Museum at the Naval Surface Weapons Center in Dahlgren, Va.

Tnx to KS2T

#### SWAP SHOP

FOR SALE: HAL DKB - 2010 Keyboard Rtty/CW -\$125. NYE MBII matching network \$125.

CONTACT: Jay Miller, KS2T

Phone: 201-244-7623

FOR SALE: Icom 551 6 mtr rig 10 watts -AM, CW, & FM w/built-in pwr sply - \$350

CONTACT: Harry Schools, KA3B Phone: 215-468-1866

FOR SALE: AEA Computer Patch CP-1 for Commodore 64 w/MBATEXT, Morse, Baudot & ASC II (See April QST pg. 45 for full

description) \$185.

CONTACT: Joe Rushton, W3YXF

Phone: 215-855-7799

FOR SALE: Heath HX-30 6 mtr SSB xmtter. Great for driving transverters - excellent condx. \$35.

CONTACT: Jack Power, W2AXU

Phone: 609-882-8811

FOR SALE: Collins 7583 revr - filters -250 Hz for CW, 2.1 KHZ for SSB & 4.5 KHZ for AM. Variable BFO have xtals for additional frequencies, noise blanker & speaker. Ideal for tunable I.F. excellent

condx. \$215

CONTACT: Jack Power, W2AXU Phone: 609-882-8811

#### A TECH NOTE BY JAY MILLER, KS2T

Here's some of the info on the MIRAGE A1015 6 meter amplifier. FREQUENCY RANGE 50-52 MHz. POWER INPUT 1 to 15 watts (20 watts max.) POWER OUTPUT 150 watts or more for 10 watts input. RECEIVE PREAMP 10db gain with 1.5 +/- .5 db noise figure. DC POWER 13.6 VDC at 18-22 amps nominal.

Here's what I must rewire since the YAESU FT-726R is at "ground" during transmit, I believe ICOM gear goes to + voltage during transmit so a IC-551 could be connected right out of the box. I wish they had an external switch to go from ground to + volts during transmit, but that would be too simple. Any different rig could be used then without opening up the amp to change that jumper wire, maybe I'll put a switch in after the warranty is over. Here's word for word from the manuel; AMPLIFIER KEYING: CAUTION the amplifier must be keyed from the driving transmitter - it does not have automatic RF keying. Do not use the amplifier until the keying circuit has been hooked up. The A1015 can be keyed up appling a "ground" or a +5 to +15 DC voltage to the RCA phono jack on the back panel during transmit,

The Al015 is factory set to accept a "plus (+) voltage" for keying. This can be changed to a "Ground" for keying by:

Now it goes on to explain a simple 2 step procedure, just take off the bottom cover and move a jumper wire from a red to a white wire, its very simple but annoying. I see the warranty is 5 years so maybe I'll put a switch in right away in case I sell the YAESU someday and go to another brand that uses + volts for keying.

This AlO15 used two MRF492 for the power transistors. It seems to me that one could easily get 175 watts (and more) out of it without damage even over a long period of use, I should have it on the air by the time you read this.

## TECH NOTE BY RICH PRIM, WASIWT

For use in the GaAsFET 432Mhz preamps INDIANA GENERAL 0.25 inch Q1 Ferrite Torroids are equal to AMIDON FT23-61.

#### VOTED TO MEMBERSHIP

WB3IGR - George M. Fazio - XYL Kathy (WB3LTH) 2169 Schaefer Road Abington, Pa. 19001 215-576-1897

#### TID BITS

Sunwatcher, Jack Power, W2AXU, reports the monthly No. for April 1984 = 68.6 - Smoothed No. for October 1983 = 68.1.

Thanks to Amelia Bowman (XYL - K30BY - recent silent key) for the card to the Pack-Rats. Call on us anytime please, for any assistance.

Condolences to Rick Como, KILOG on the loss of his XYL Ellen.

K3IPM, Stan Smith sent a note and sez hello to the gang from Boca Raton, Florida.

Congratulations to Horace Deacon, W3AJF on his 50 year membership in the ARRL. He received a plaque from Hugh Turnbull, W3ABC, The Atlantic Division Director, at our ARRL nite meeting. Jay Miller, KS2T reports the 6 meter beacon is back on 50.070 MHz located in Toms River, N.

## VISITORS MAY 17, 1984 MEETING

W3ABC - Hugh - College Park, Md. KA2NYF - Janet - Deptford, N.J.

WB8ZAR - Dave - Cinnaminson, N.J.

WB3IGR - George - Abington, Pa.

W3AJS - Ed - Oreland, Pa.

KA3B - Harry - Phila., Pa.

KB3XG - John - Newtown, Pa.

\* \* \*

#### NOMINATION OF OFFICERS - 1984-1985

The Nominating Committee submitted the following:

PRESIDENT - WB2VLA - David Power
V. PRESIDENT - WB2RVX - Michael Gullo
COR. SECRETARY - AK30 - Frank Kerns
REC. SECRETARY - W3IIT - Harry Brown
TREASURER - K3GAS - Doc Cutler
DIRECTORS - 2 YEAR TERM -

WA3AAJ - James Ward WB3IND - George McMahon

Nominations remain open until the regular meeting on June 21, 1984 when nominations may be made from the floor. Make sure you obtain permission from the candidate you wish to nominate.

\* \* \*

#### FROM NORTHEAST VHF NEWS

NEW 0 METER VHF-UHF NET STARTING: N2BMN, Ralph, of Little Ferry, NJ has suggested forming a net on 40 meters for coordinating VHF-UHF operators with skeds on tropo, meteor scatter, and other forms of propagation and also to sked for working new grids, DXpeditions, SWOT memters, etc. The frequency of 7.284 MHz has been suggested, beginning on Sundays at 1400Z. Changes in time and frequency may be made at a later date. The net control stations will be N2BMN and KA2BTD. The net name will be the "East Coast VHF-UHF Coordination Net." Stations are asked to provide their call, grid square, and SWOT number (if any) when checking in to the net. (TNX SWOT Bulletin)

TWO METER BEACON NEWS: With the coming of spring and more favorable propagation, the news of VHF beacon activity is of interest. The Lincoln Communications Society of Lincoln, Nebraska, has constructed a beacon transmitter to provide a signal for propagation studies and frequency reference. The beacon currently operates Al on 144.055 MHz with an output power of 10 watts to an omni-directional antenna. The beacon location is in the northeast corner of grid square ENIO. The ID call sign is WBOOIY/B. Reception reports sould be sent to the Lincoln Communications Society, Attn: Secretary KONG, 1801 S. 48th St., Lincoln, NE 68506.

(215) 355-5400

MÄRKETLINE

975 JAYMOR ROAD

Computers & Peripherals

CARL BARISH

PRINTECH 13620 NE 20th Suite D Box 4247 PRINTING Bellevue 746-6000

Bellevue, WA 98009

NE 7.8320

GEORGE'S VAN DYKE, JR., P.E.

W3HK

4607 CONVENTIANE PHILA, PA 19114



AMIL S. GUMULA PRESIDENT

G. RADIO PARTS CO. 939 TOWNSHIP LINE RD ELKINS PARK, PENNA, 19117

Authorized Distributor

(302) 328-7728 ORDER LINE 800-441-7008



Delaware Amateur Supply "AMATEUR SALES AND SERVICE"

PAUL WASQPX KATHY KASIYO

71 MEADOW ROAD NEW CASTLE, DELAWARE 19720

AMATEUR SALES & SERVICE

(215) OL 9-5900

## HAM" BUERGER INC.

Communication Specialists

**BOB HERSHMAN** WA3ZID

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

PENN ARC A GENERAL PURPOSE CLUB

Monthly meetings the 4th Tuesday-8PM Montgomery County Community College 340 DeKalb Pike, BlueBell, Pa. Souther and Profite a to Lasting of the

CLUB REPEATER - 223.04/224.64 Mhz

# The Ham Radio Publishing Group

Greenville, NH 03048 (603) 878-1441

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

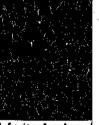
CALL DOC CUTLER (K3GAS) FOR YOUR ELECTRONIC NEEDS

NEW, RECONDITIONED, OR AS IS.

LOW PRICES .............

by appointment

215-635-1078



#### Heathkit ELECTRONIC CENTER

Stan Demski Manager

Heathkit Electronic Center 6318 Roosevelt Blvd. Philadelphia, Pennsylvania 19149



Harriet Soltoff Home: (215) 947-4483

(215) 757-1585

Neshaminy TRAVE SERVICE

2337 Neshaminy Blvd. Bensalem, PA 19020 BROWSING-THURS. 7~1.09~1 SAT. 9".4"

A Committee of Marketine and Day-Nite (215) 455-2121

# FERTIK'S ELECTRONICS . . . .

Components & Equipment

LEON FERTIX

5400 ELLA STREET! PHRADEUPHIA, PA. 19120

LUNAR KLM ASTRON MICROWAVE MODULES TAMA

(717) 868-6565

THE

## VHF SHOP

BOX 349 R.D. 4 MOUNTAINTOP, PA. 18707 K3MKZ GERRY

215-PI5-9007

WA3FOF

RALPH ALEXANDER

Electronic Equipment Repair Technical Writing

(302) 328 7728 ORDER LINE 800-441-7008



#### Delaware Amateur Supply "AMATEUR SALES AND SERVICE"

71 MEADOW ROAD NEW CASTLE, DELAWARE 19720

215-342-5982

WA3HIT

Paul and Betty Rilling

INCOME DIVERSIFICATION

5830 Weymouth Street -Phila., Pa.19120 Control of the second s

Amateur Radio's Technical Journal PO BOX 931 **FARMINGDALE, NY 11737** 

\$25 one year \$53 three years

215-742-2437

WA3HIT-co-worker

STOTT WINDOW CLEANING and BUILDING MAINTAINANCE

We clean and repair windows. We repair the A.P.Orleans aluminum rods

5723 Rising Sun Ave. Phila. Pa 19120

