

PACK RATS'



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

CHEESE BITS



MT. AIRY VHF RADIO CLUB, INC., PHILA., PA. ARNS
50.2, 144.2, 432.1, 1296 Mhz, WR3ACD - 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 18966

VOLUME XXI

APRIL, 1979

NUMBER 4

THE PREZ SEZ

Lately we have all heard, both from outside the club and even from some of our own members, that the Pack Rats is nothing but a contest club! If one was to confine his attention to just the various VHF contest results, one might very well conclude that this was true, for the Pack Rats have indeed scored well in VHF contests in the past. Does scoring well in contests mean we are solely a contest club? Although most members are proud of our excellent contest record, I believe they would also admit contesting is not their main interest.

What then are the goals of the Mt. Airy VHF Radio Club? To paraphrase the club constitution, they are to keep abreast of the latest technology in VHF and UHF communications and to promote activity and improve operating skills on the weak-signal (DX) portions of the VHF and UHF and microwave amateur bands. Most VHF and UHF oriented hams would agree that this is precisely what contests were originally intended to do!

Pack Rats have always been at the forefront of VHF/UHF technology and operating. Some of the operating events that come immediately to mind are early DXpeditions to North Carolina and Delaware on 1296 Mhz and the W3CCX/3 and HK1TL Moonbounce operations. (How many Vhf clubs have built two complete EME stations and then used them to contact each other from two different continents?) Two Pack Rats were recently among the handful of amateurs to be the first to contact Europe (ZB2BL-Gibraltar) on 50 Mhz F₂ propagation. For the past three years, the club has sponsored the Middle Atlantic States VHF/UHF Conference - a weekend of technical talks and seminars attended by top VHF'ers from all over the East. Pack Rats are active on all bands through 10 Ghz (HF too!) Many have SSB capability on 1296 Mhz and at least three are active on 2304 Mhz. The club sponsors open nets on all VHF bands through 1296 each Monday night. Lately, many members have built and are presently using state-of-the-art solid state SSB rigs for all of the VHF and UHF bands through 432. Plans are even in the works for 100% solid state SSB on 1296 and 2304 Mhz!

Because of the limited activity on the VHF and especially the higher UHF bands, when is the best time to test out our operating skills and latest equipment innovations? Contests - you bet! If this makes us a "contest club" I guess we're a contest club, but I think most hams that know the members or have attended our meetings realize that it's quite a bit more than that. I guess when you're on top, you always come up against criticism. The trick is to learn to accept criticism for what it's worth and remain true to your principles. I don't think the Pack Rats have done too badly on either point!

73, Bill, W3HQT

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SWAP SHOP ITEMS - no charge.

DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING.

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OFFICERS: 1978-1979

PRESIDENT: W3HQT, Bill Olson
VICE-PRES: WA3NFV, Dan Mitten
COR. SECY: WB3HHO, Paul Randolph
REC. SECY: K3IGX, Dick Boyle
TREASURER: K3GAS, Doc Cutler

DIRECTORS:

W3HMU, Tony Souza (Ex-Officio)
W3IIT, Harry Brown (2 years)
WA3JUF, Dave Mascaro (2 years)
K3MWV, Dick Pierce (1 year)
WB2SZK, Randy Bynum (1 year)

MONDAY NIGHT NETS:

144.2 MHZ 7:30 PM
50.2 MHZ 8:30 PM
221.4/224.58 MHZ 9:00 PM
1296.3 MHZ 9:15 PM
432.1 MHZ 9:30 PM

NET CONTROL

W2EIF
W3CL
K3GAS
W2EIF
K3IUU

FRIDAY NIGHT ATV NET:

439.25 MHZ 7:00 PM

PACK RAT REPEATER - WR3ACD - 222.98/224.58


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Bruce Clark

CALENDAR OF COMING EVENTS

Syllabus by Lee, K3MXM

APRIL

April is named from the Latin word Aperier - "to open" - to honor the first buds of Spring....

Also, Daylight Saving Time begins on April 29th - clocks ahead - leap f-o-r-w-a-r-d.....

- 1 Penn Wireless ARC Hamfest, National Guard Armory, Roosevelt Boulevard (U.S. Rt. 1) at Southampton Ave., Phila., Pa. 7:00 a.m. to 4:00 p.m. - Talk-in 146.52 and 146.37/97
- 1 Calvert Hall Hamfest - Towson, Maryland
- 8 Palm Sunday
- 10 Walter Hunt invents the safety pin and sells patent for \$400.00 - 1849
- 12 First Day of Passover
- 12 Board of Directors Meeting - QTH, W3IIT, Harry Brown, 3012 Potshop Road, Norristown, Pa. Directors and interested Club Members cordially invited to attend.
- 13 Good Friday
- 14 Pan American Day
- 15 Easter Sunday
- 3 General Club Meeting - Southampton Free Library, 8:00 P.M. Topic: TVI - What is it. How to cure. How to calm your neighbors. Is it all the fault of Amateur Radio. Special Speaker: Mr. Chester Pierson, K3TV. The Mario Raffle, Frankie's Silent Auction, Refreshments. An open meeting to club members, their friends and interested parties...
- 21 EME Contest - Part I
- 21-22 Trenton Computer Festival, Trenton State College, Rt. 31 South of Rt. 295, Trenton, New Jersey
- 22 Delaware Valley Radio Assoc. Hamfest - N.J. National Guard Armory, Eggerts Crossing Road off Route 206, Trenton, New Jersey. Information: DVRA - Box 7024, West Trenton, N.J. 08628
- 27 First Social Security Payment 1937. We are wondering if anything will be left in the pot when we belly up to the pay window???
- 27-28-29 Dayton Hamfest, Dayton, Ohio. The Big Daddy of them all...
- 29 Williamsport, Pa. Hamfest, Woodward Township Fire Hall, Rt. 220 South Information: Tony, 1-717-322-6017
- 30 For you Train Buffs - Casey Jones Train Wreck, 1900

COMING EVENTS IN MAY

- Y
- 5 Pack Rat Banquet, Warrington Motor Lodge.
- 17 ARRL Nite, Speaker from Headquarters Tom Frenaye, K1KI
- 24 First 220 Mhz Transmitter Hunt. Starts at 7:00 P.M.

1. KENWOOD 7600: The new 7600 2 Meter FM rig is selling well in the local area, and with good reason!! A demo unit was borrowed from Pres at Hamtronics for evaluation. This is a very compact package, and, as is typical of Kenwood, everything seems to have been done just right. A four digit readout is used to indicate frequency with the first two unused digits being "14". The built-in synthesizer will provide operation on any of 800 frequencies in 5 Khz steps. For repeater use, the mode switch can be used to select between 600 Khz low or high inputs. For other splits, the mode sw can be set to the "M" position and the transmit freq. dialed in. The receiver can be set on the frequency desired, and, when the PTT switch is pressed on the mic, the output freq. set in the memory, will be transmitted and displayed on the LED readout. A front panel switch selects either 1 or 10 watt power levels, and, when on low power, the meter lamp turns green. This rig can be used with the RM 76 micro-processor control unit. It is possible to keep track of what is happening on two channels by setting up one receive frequency and entering it into the memory, by just pushing the "M" push button. The second channel is then dialed up and the operator can check the first by simply pushing the "MR" memory recall button. It may be that equipment only seems to be getting more expensive. Compared with what we could buy 5 years ago, this little gem is actually cheaper!! Price \$375.00.

2. TEN TEC 509 ARGONAUT: A sample 509 was borrowed from Hamtronics in Trevoe, Pa. for use in this evaluation. The transmitter unit in this CW SSB T/R puts out 2-2 1/2 watts. This is enough power when conditions are right and qrm can be avoided. By picking your spots and time of operation it is possible to have many 100% QSOs. Using a 15 M dipole lying on the roof, I was able to contact stations in Florida, in answer to their CQs. That seems to be the secret to QRP operation. There is no tune-up required on the transmitter, just switch to the band of operation. The receiver has an RF peaking control. The 4/1 ratio drive on the dial unit makes tuning a pleasure. The 100 div. skirt actually reads Khz on all bands but 10 meters, where the readout is 4 Khz per div. The radio is not only compact, but very light weight, and could easily be operated from a small rechargeable battery. Such a battery could be connected to a solar battery to expand operating time. (if operation is outside, and the Sun is out, of course). A converter for 432 Mhz was used ahead of the receiver on the 10 meter range in order to check the possible use of the 509 with VHF and UHF transverters. No problem was found in tuning in SSB stations using the 432 set-up. This could be a way to not only have an inexpensive rig for HF use, but also be able to operate on the VHF without having to spend 700-800 dollars just for the one VHF band. All units would operate from 12 VDC, and the whole package would be easily transported for portable use. Price \$369.00.

* * *

VHF/UHF REPORT

By Joe, W2EIF

This report covers the period February 14 thru March 16, 1979. The 50 Mhz activity has again superceded the activity on the upper bands.

Bill, WØRST, formerly K3ZSG, reports that there was an excellent tropo opening on Feb. 14. Signals were good out to 1000 miles from his Kansas location, and included frequencies thru 432 Mhz. He reports that he often works W6XJ located on Mt. Polomar, California and on 2 meters! W6XJ may be remembered as Gary who operated W3KWH in Pittsburgh for so many years.

Feb. 21 produced a strong reflective cloud to the South in the AM. Signals from Maine to California were heard here on back scatter. No South American stations were heard. This was followed by an aurora in the afternoon and a short E_s opening to the Midwest in the evening.

February 26 produced a short aurora good on 6 and 2 meters.

March 4 produced a 50 Mhz opening to S.A. in the AM, K4ERO, ECI was heard working stations in the 1,2,3,8 and 9 call areas.

March 10 gave us an opening to the Caribbean in the AM and yielded an aurora opening in the afternoon and evening. Signals were very strong on 6 and 2 meters and stations from Maine to Ill, were worked from here. It was reported that WALDZJ, Maine worked VE8BY in

(CONTINUED ON PAGE 5)

VHF/UHF REPORT
CONTINUED

Yellow Knife, Northwest Territory during this opening.

The 50 Mhz activity has shifted to the West Coast and S.A. It is reported that S.A. stations are working into Japan and that West Coast stations are working into New Zealand and Australia!

It is also reported that EI2W has reactivated his station on six and we should look for him the next time the band opens to the East.

* * *

VISITORS AT THE MARCH 15, 1979
MEETING

| | |
|--|--|
| WB3KNU, Hugh Odner, Huntingdon Valley, Pa. | WA3CQO, Steve, Norristown, Pa. |
| WB2VLA, David Power, Trenton, N.J. | WB3CTP, Paul Capone, Norristown, Pa. |
| K2KRC/3, Frank Bremer, Phila., Pa. | WB3EFO, Ed Lee, Huntingdon Valley, Pa. |
| WA3TSE, Bill Letvenko, Doylestown, Pa. | |

APPLICATIONS FOR MEMBERSHIP

WA3TSE, William Letvenko
59 Pine Valley Road
Doylestown, Pa. 18901
215-348-8933

* * *

TID BITS

Congratulations to the DVRA (Delaware Valley Radio Association) W2ZQ/WR2ADE celebrating their 50th year!

Our best wishes to Lyn Rowland, W3NSI and Sally tying the knot on Sat. April 21, 1979.

Best wishes to Roxann and Harry Brandt (KA3CBY-K3LOM) on their upcoming Wedding Anniversary. Daughter Altair now is KA3COM.

Did you know that WA3AAJ, Jim Ward used to be a KH6

Charley Cloud, WB3CPW is retiring the first of September. Good luck, Chief.

N3AHI reports that the ARRL has given the green light for the Pack-Rats sponsored "Sam Harris Memorial Award" based on multi-op results of the September VHF QSO Party - more on this later.

A speedy recovery to John Tate, K3KTY who entered the Warminster General Hospital on April 15th for knee surgery.

W3GJC runs a used equipment net on the WARA Repeater (147.00/60) at 8 PM on Wednesday evenings.

Carl and Jane Barish, WB7TCF send their best to the Pack-Rats via an FB newsletter from Kirkland, Washington. They and Lloyd Shoenig, K3ZPN/7 are doing just fine out there.

Our friend Dick Bokern, WB9PUJ reports working the Jan. VHF SS but didn't hear any of our gang out there in Indiana.

Andy McLellan, VE1ASJ of New Brunswick, Canada reports his beacons on 50.088.8 Mhz and 144.072.4 Mhz in operation and sign VE1SIX. Reports appreciated. He also thanks the Pack-Rats for the points in the January VHF SS. (258 QSO's/31 sections - VYFB!)

Many of you would like to know where Carl, K3DLS buys those delicious Danish on meeting nights -- Schenks Bakery, 5905 N. 5th St., Phila., Pa. 19120. Phone: 215-HA 4-0409.

* * *

You can always tell a well informed person - their views are the same as yours...

De Ham Hum

If you miss our Monday Nite Nets, a good place to catch up on ARRL News and local happenings on the WARA Repeater . 147.60-00 Wed. 5:15 p.m., Sun. 8:55 p.m.

* * *

ARRL BULLETIN NR 14 FROM ARRL HEADQUARTERS NEWINGTON CT MARCH 8, 1979 TO ALL RADIO

ATEURS BT: During the February solar eclipse did you observe unusual propagation phenomena? To have your observations correlated with those of the solar eclipse nets organized by the Oregon State University Amateur Radio Club, send a copy of your reports to Allen Lefohn, KA7CBV, P.O. Box 196, Clancy, Mt. 59634 AR.

AN HISTORICAL LOOK AT AMATEUR RADIO

BY DAVE ZIMMERMAN, W3ZD

Reports of planned political and legislative actions which would have a far-reaching effect on amateur radio are causing waves among the ham ranks. Nothing stirs a group more than trouble or threats of trouble which would disturb the status-quo.

The recent actions on the part of the broadcasters and manufacturers to make inroads into the frequency spectrum, largely ham bands, through the upcoming WARC is a real threat. And amateur groups and organizations are reacting to this threat. But this is not the first time that amateur radio has been threatened, and it probably will not be the last.

A look at the history of amateur radio shows that the serious threats to our hobby have been numerous. The best coverage of this subject is found in QST and the best article was printed in May, 1934, the Twentieth Anniversary Commemorative issue. This article tells how amateur radio came into being, how the ARRL was formed, and how the many problems were solved. The words of this issue are almost 45 years old, yet have a timeliness about them that is amazing. After reading this story, I was convinced, (if I had not been before that) without the League, there would be no ham radio as we know it today.

It was decided to run in serial form a reprint of the history of amateur radio from 1914 to 1934 as found on page 20 of May, 1934 QST. Permission has been granted by ARRL to do this.

TWENTY YEARS OF AMATEUR RADIO

C.B. DeSoto

QST May 1934

1914: Amateur Radio ... a group of experimentors, two thousand more or less...scattered throughout the country without cohesion or mutual recognition..hearing each other, talking to each other occasionally over distances of ten to 100 miles for stations up to a kilowatt, of up to 300 miles for those with boundless luck and pocketbook...vaguely regulated by the government to the extent of license issuance...other than that, every man for himself. The Audion bulb was being mentioned in awed tones...a few of the big fellows had them, and debated righteously about the amount of glow that gave the best sensitivity... And there it was. For three years the art had remained stagnant. It had gained recruits, idly and haphazardly, but it had not gained strength and prestige. After all, what group of scattered enthusiasts ever did possess those attributes? History may have been in the making, but the mills had stopped grinding. (Next month we will continue with: "In 1914 History Began...")

* * *

LARRY H. WILL, WA2ZAT, APT. F8, 180 FRANKLIN CORNERS ROAD,
TRENTON, N.J. 08648.

AMATEUR TURNS ON 1296 MHZ FM REPEATER

Amateur radio operator, Larry H. Will, K3ADS of Villanova, Pa. turns on what is believed to be first regular eastern U.S. 1296 Mhz amateur FM repeater. System was finished in December, 1978 and became operational on January 20, 1979.

Repeater receives on 1280.800 Mhz (15 KHz deviation) and transmits on 1295.800. System utilizes a 6 cavity duplexer with receiver sensitivity of 0.8 UV and output power of 8 watts. Polarization is horizontal but ultimately will be vertical. 1295 system is currently "slaved" to another system on 223.38/224.98, but will be relocated to a tall TV tower in Trenton, New Jersey.

Frequencies and deviation chosen were to allow easy conversion from current state-of-the-art 440 Mhz equipment. Repeater utilizes a mixture of converted commercial equipment and home brew up and down converters. The 6 cavity duplexer is from a military surplus radio relay set that operated in the 800 to 1350 Mhz region.

* * *

W3HK REPORTS FROM (ANTENNA INFO BROCHURE)

"The Personal Communications Foundation believes that the following steps will help make sure you have a safe and legal installation:

(CONTINUED ON PAGE 8)

SWAP SHOP

FOR SALE OR TRADE: Model 19 Teletype complete with power supply and Altronics Howard dual input converter. Like brand new. Make cash offer or trade for two meter gear or scanner.

CONTACT: Ralph Hairsine, K3MPX
1408 Wedgewood Road
Wilmington, De. 19805
Phone: 302-994-6878

FOR SALE: Oscilloscope (500 Khz, 2 channel), HP 650A signal generator, Scayo CCTV Camera, Motorola 450 Mhz pre-prog TX, UHF Amp, UHF converter; Hy-Gain "New York" TV (VHF) antenna. 50 ft. Rohm Tilt-over tower, TH3JR, HamIII rotor. Trap vertical

CONTACT: Scot Garfinkle, WA3VJS
Phone: 215-576-8076 evenings.

FOR SALE: Hewlett-Packard Type 5245L counter w/type 5253B (50-500 mhz) and 5254A (.3-3 Ghz) frequency converters. Make reasonable offer.

CONTACT: Dennis Silage, WB2LGJ/3
Phone: 215-622-7486

FOR SALE OR TRADE: Brand new in Carton: 7 ft. parabolic dish; Lafayette Finco Mfg. for UHF TV can be conv. to 432, 1296 etc. Heathkit SB-614 Station Monitor Kit; new in carton. RCA xtal rig for 432 Mhz. 12,000 Mhz xtal; ckts. rewkd. w/6DK6, 12By7A, 6360, 5894 trip. & finl. schematic. Heavy duty aluminum mast, w/hinge ass'y. 35 ft. aluminum lite pole w/tapered stl. extension to 2"od. base 12" sq. mast tapers from 8 to 4"od. w/specially made Stainless stl. hardware. Great for use w/ a Moonbounce Array. R-48 Rcvr. AM, for 220 Mhz. excellent condx. Parts for 1900 V.P.S. pole pig bridge rect. etc. Will accept any reasonable offer to move the gear provided buyer will put it on the air for the next contest!!

WANTED: 1296 Mhz. Amplifier to drive from 10 w; 100w. out or tubes and layout to build stripline amp. and RG-17/U cable, 50 ft.

CONTACT: John W. Allen, Jr. W3CXU
1119 Highland Avenue
Abington, Pa. 19001
Phone: 215-886-4109

FOR SALE: Autek Research QF-1 Filter, New. List \$65. Sell \$35. Ameco pre-amp 10-160 mtrs. includes 6 mtrs. 2 months old. List \$79.95, sell \$45. Cushcraft 6 mtr. ringo ranger - 3 months old. \$35.

CONTACT: Charley Cloud, WB3CPW
Phone: 215-646-6012 after 5 P.M.

FOR SALE: Drake TR-22, crystals as follows: 146-16/76, 19/79, 25/25, 52/52, 94/94, 147 - 00/60, 09/69, 39/91, 42/42 - includes rechargeable batteries and instruction manual \$125. Midland 220 Mhz transceiver (model 13-509) xtals for 223.5 simplex and Pack-Rat repeater 222.98/224.58 - 25 watts instruction manual. Bargain at \$125.

CONTACT: Earl W. Downs, WA3QWO
Phone: 343-0459

* * *

Received 2/5/79
68, Max Road
Quinton, Birmingham 32(England)

January 27, 1979

Mr. H.B. Stein
Mt. Airy V.H.F. Radio Club
2087 Parkdale Ave.
Glenside, Pa.

Dear Harry:

Thank you very much for your letter and Radio Examination Guides which you kindly obtained for us from the F.C.C.

Our only real news in MARS is we have now obtained a permanent HQ which is being rented from Birmingham City Council. The building looks bad now but the members are keen to put this right. Having our own place should increase our membership and keep the new blood rolling in.

I enclose our latest newsletter("Probe" News from MARS) which is by no means monthly yet and wish you and your fellow members best wishes for 1979 - and good luck in the contest.

kindest regards,
Norman Guttendge, (Secretary (G8BHE))
The Midland Amateur Radio Society

W3HK REPORTS FROM ANTENNA INFO BROCHURE
CONTINUED

1. Check with the local governmental agency. Ask whether your home is zoned for an amateur radio or citizens band tower and antenna.
2. Look at the actual zoning ordinance. Pay special attention to the definitions. Many zoning ordinances distinguish between "buildings" and "structures." Others distinguish between towers physically attached to the house, either by guy wires or mounting and towers that are not attached.
3. See if a building permit is required. If so, be sure to get one. They are usually quite inexpensive, often less than one percent of the cost of the tower. As part of the building permit, a local inspector will check and make sure that the base, guy wires, etc., meet local safety requirements. Modern commercially made towers are extremely safe and have a large safety margin, but only if you install them according to the directions! Paying \$10.00 to \$25.00 for an expert to inspect the foundation and finished installation is the cheapest insurance you can possibly buy! If a permit is required and not obtained, your homeowners' insurance may not insure the tower and you have given neighbors, who might object, ammunition to require you to take the tower down.
4. In a limited number of cases you may need either a zoning variance or a conditional use permit to erect a tower higher than the local zoning board requirements. If so, it is far easier to apply in advance than to put up the tower and apply later. Most local governments are quite cooperative if you apply in advance and follow their rules. Variance provisions are used to provide flexibility from dimensional regulations such as setback or height restrictions. Conditional use permits are used where towers or antennas are not otherwise allowed. A public hearing is usually required before such permits are issued.

5. In addition to local ordinances, real estate developers or homeowners' associations may impose their own requirements in a subdivision. These requirements are usually known as deed restrictions or Conditions, Covenants and Restrictions (CC&Rs).

If you are thinking of moving into a new area, ask for a copy of the deed restrictions in advance of signing an offer to purchase the property. If you already own a home, a local realtor, title insurance company or lawyer can obtain copies of the deed restrictions, if any, for you. Don't take the word of the real estate salesman who may be wrong!

If there are no deed restrictions, you need only be concerned with local zoning, and building codes. If there are deed restrictions, read them carefully. Look at the definitions. See if there are any restrictions on outside antennas or on the height of buildings or other structures or if a local architectural control committee must pass on any additions or changes to your property.

Deed restrictions are legal documents. A local lawyer familiar with real estate law can read the restrictions in only a few minutes and advise you. Even if the deed restrictions prohibit or restrict the size of towers and antennas, they may be unenforceable if many of your neighbors have erected such towers and antennas and no objections have been raised.

If you follow these simple rules, you should not encounter any problems or unpleasant surprises. Happy Communications."

* * *

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* * *

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10960 Wilshire Boulevard, Los Angeles, Cal. 90024.

A REPORT FROM FUNKSCHAU DATED FEBRUARY, 1979
BY FRANK BREMER, K2KRC/3
DL0NN-radio-amateur club station in Upper Bavaria

Virtually every one of the roughly 565 local associations of the West-German amateur-radio club (DARC) has its own club station, and this will generally be in a school, in someone's home or in a company. The local associations are a few and far between that can afford to set up a club station on their own bit of ground and within their own four walls. In the winter of 1967/68 the members of the local association C 08 (the region to the south of Munich) decided to build their club station on an almost ideal hilltop. This is 750 meters above sea level and has the call sign DL 0 NN. If one disregards the alpine chain to the south, there's nothing to hinder radio operations, which is primarily important in view of the fact that the main activities of DL 0 NN are in the higher-frequency amateur-radio bands such as 2m, 70 cm and 23 cm.

From the very start there was the desire, in view of the excellent location, to work EME (Earth-Moon-Earth) radio links. And it was possible to come by, at a relatively bargain price, a parabolically suspended, i.e. parallel to the Earth's axis, parabolic reflector with a diameter of 3 meters. Its gain is 19 dB at 432 Mhz and 29 dB at 1296 Mhz. To overcome the total loss of 233 dB of an EME linkup, a bit of effort was necessary.

The transmitting and the receiving system were built by the members and on 23 February 1975 everything was ready: with 7 dB above the noise background the Californian station WA6LET (operator WB6KAP) at the Stanford Research Institute, Menlo Park, was raised on 432 Mhz. WA6LET was using a reflector with a diameter of 45 meters and his transmitter had a power of 700 W. It's interesting to note that such a linkup is only possible twice a year when the constellation of the Moon is right. The home-made receiver of DL 0 NN is so sensitive, by the way, that when the sun crosses the reflector the noise increases to 4 dB as against the background noise of 0.8 dB.

For experiments in the 1296 Mhz band there's a reflector on the roof of the station with a diameter of 1.75 Meters and this can be turned in all directions. Currently, a radio beacon beams over this in a direction of 300° and with the call sign DB 0 AJ; the transmitter power is 10 W and the signal has been picked up as far away as Cologne.

For special activities in contests or over-the-horizon tests, a mountable lattice mast was erected last year bearing a platform and an antenna system. For 145 Mhz there are four horizontally polarized ten-element Yagis combined into a 40 element array with about 16 dB of gain. For 432 Mhz there are four horizontally polarized 25-element Yagis combined into 100-element array with a gain of roughly 19.5 dB. Also, integrated into this antenna array is a four-element quad for 145 Mhz and a vertically polarized 20-element Yagi for 432 Mhz. The furthest linkup on 145 Mhz made with this arrangement was UB 5 (Asian USSR). By way of OSCAR (amateur radio via satellite), 14 countries have been contacted until now. The hoo's antenna system is turned by hand using the steering wheel from a car, this calling for a bit of turning moment.

For the shortwave range there's simply a ground-plane antenna for the bands 10, 15, 20 and 40 meters, since for activities such as these it isn't necessary to have a particularly exposed location. The power feed for all equipment comes by way of a five-core underground cable from a nearby village. The station is also fitted out with a sophisticated alarm and security system.

NOTE: From Funkschau, Feb. 1979: The English 10 GHz Beacon stations on the Island of Alderney (GB3ALD) and on the Isle of Wight (GB3iow) are again on the air.

In the Fall of 1978, two Beacon stations were on the air from Faroes Islands. (OY6VHF on 144.885 MHz and OY6VHF on 432.885 MHz).

A Beacon station on Cyprus is operating on 50.5 MHz.

The six meter Beacon ZB2VHF on 50.04 MHz is operating from Gibraltar.

* * *

From HR report No. 245 of March 16, 1979

A NEW 6-METER DX RECORD was set Monday night when LU8AHW and HL9TG made contact at 6000Z. The same evening several VK4s worked WA4TNV/KL7, while ZB2BZ heard the Brazilian beacons but was unable to make himself heard through the JA/LU QRM. KG6DX, VKs and ZIs have been working the West Coast. Thanks SMIRK.

FOUNDATION FOR AMATEUR RADIO

PRESS RELEASE

The Foundation for Amateur Radio, Inc., a non-profit organization with its headquarters in Washington, D.C., announces its intent to award six scholarships for the academic year 1979-80. All amateurs holding a license of at least the FCC General Class or equivalent can compete for one or more of the awards if they plan to pursue a full-time course of studies beyond high school and are enrolled in or have been accepted for enrollment in an accredited university, college or technical school. The scholarship awards range from \$250 to \$800, with preference given to some of them to residents of various areas.

Additional information and an application form can be requested by letter or postcard, postmarked prior to June 1, 1979, from:

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The Foundation is devoted exclusively to promoting the interest of amateur radio and scientific, literary and educational pursuits which advance the purposes of amateur radio.

* * *

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* * *

From ARRL Directors' Letter No. 1731 of March 15, 1979

A new edition of the Amateur Radio Service Rules and Regulations, Part 97, is now available from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402. The stock number is 004-000-00357-8; the price is \$1.40. It contains rule changes up to January 1979.

A note on new ARRL publications: The 1979-1980 Repeater Directory went to the printer on schedule, and should be available for distribution during the first week in April. It will sell for \$1.00 in the U.S., \$1.50 elsewhere. Satellite Communications also went to the printer on schedule, but we do not yet know the delivery date. It will sell for \$4.75 U.S., \$5.50 elsewhere.

* * *

W2AXU, Jack Power reports the Sunspot monthly provisional number for Feb. 1979 is 138.

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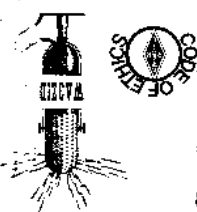
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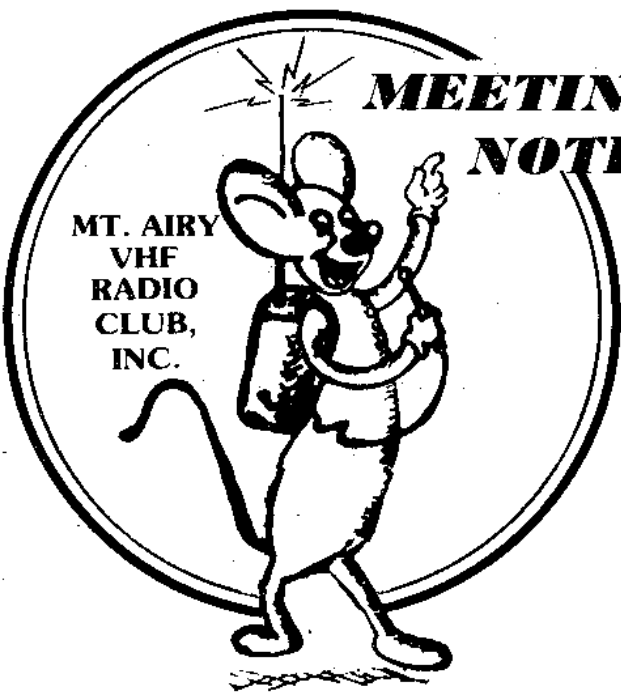
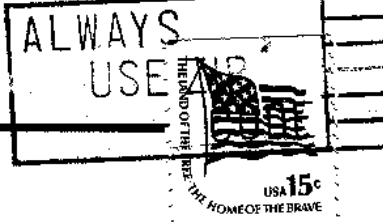
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