

PACK RATS'



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

CHEESE BITS



MT. AIRY V.H.F. RADIO CLUB, INC., PHILADELPHIA, PA.
(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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SOUTHAMPTON, PENNSYLVANIA

ARNS

VOLUME XV

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NUMBER 11

THE PREZ SEZ

Our second annual HAMARAMA held on October 7, was another outstanding success. A major indicator of this success is the paid attendance; this year's count of 598 represents a 70% increase over last year's. The weather was excellent, tons of equipment were sold by scores of vendors (including our own leather lunged auctioneer), and hundreds of eyeball QSO's were completed.

A HAMARAMA innovation that was particularly well received was the Pack Rat home brew exhibit. These diversified projects from ATV through SSB, for 50 MHZ through 2300 MHZ attracted much interest and many favorable comments were heard.

Our "thanks and well done" to the HAMARAMA master mind, W3ZD, and to the many members who assisted him in this ambitious undertaking.

The next major event on our club calendar is the VHF Sweepstakes on January 5-6, 1974. Rich, K3ACR, has been named our contest committee chairman and has sent questionnaires to all members. Please return these completed questionnaires to Rich as soon as possible. Although this event is two months away, the early fall weather is ideal for completing antenna work. Do it now before the cold winds of winter blow!

Dick, W3FQD

* * *

The following letter was received acknowledging receipt of the Club's position on Docket #19759: United States Senate, Washington, D.C. 20510 October 2, 1973

Dear Mr. Stein:

Thank you for sending me a copy of the "Comments to Notice of Inquiry and Notice of Proposed Rule Making" submitted by the Mt. Airy V.H.F. Radio Club, Inc. to the Federal Communications Commission concerning Citizens Radio and Amateur Radio Frequencies.

It is helpful to have your views on the subject. I will be following the current FCC inquiry with interest, and am glad to have your comments for my review.

Sincerely,

Richard S. Schweiker
United States Senator

PACK RATS' CHEESE BITS IS A PUBLICATION OF THE MT. AIRY V.H.F. RADIO CLUB, INC. PHILADELPHIA, PA. AND IS PUBLISHED MONTHLY.

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WE OPERATE ON AN EXCHANGE BASIS WITH OTHER PUBLICATIONS AND ANYTHING THAT IS PRINTED IN CHEESE BITS MAY BE REPRINTED, UNLESS SO STATED, AS LONG AS THE PROPER CREDIT IS GIVEN.

* * * * *

DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING.

SWAP SHOP ITEMS - NO CHARGE

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

MONDAY NIGHT NETS: NET CONTROL

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

FRIDAY NIGHT NET: NET CONTROL

439.250 ATV NET - K3ZKO/WA3AXV
19:00. HRS.

A 5

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CALENDAR OF COMING EVENTS

Syllabus by Lee, K3MXM

NOVEMBER

- 7 Wednesday: Board of Directors Meeting - QTH WA3NGK, Harry Brown, 3012 Potshop Rd., Norristown, Pa. If you get lost instructions can be obtained by calling 584-4846. Directors, direction finders and interested parties cordially invited.
- 10-11 ARRL Sweepstakes (Phone)
11 Sunday, January Contest Coordinators meeting at Contest Chairman QTH Rich, Pattison, K3ACR, 717 Paxon Ave., Wyncote, Pa. If lost, call 885-3830. Time: 1:30 P.M.
- 15 Thursday: General Club Meeting, Southampton Free Library, 947 E. Street Road, Southampton, Pa. 8:00 P.M. Guest Speaker, W2DU, Mr. Walter Maxwell, "Misconceptions of SWR and Reflections" Mr. Maxwell has had a series of articles in the past and current issues of QST and here is your chance to ask the author questions. Get a better explanation of one of the biggest misunderstandings in amateur radio. Now it can work for and against your signal. Guests and other club members cordially invited. Refreshments and social time following meeting. Silent auction and MARIO'S raffle. Well worth the coming just for this special attraction.
- 17-18 ARRL Sweepstakes (CW)

DECEMBER

- 15-23 Space Net Contest - Featuring Apollo 8 & 17 mission. This is a nine (9) day contest - straight thru!
- 20 Closed Club Meeting * Members Only. Preparations for January Contest.

JANUARY

- 5-6 January VHF SS Contest - Mark your calendar. Put aside everything else. No outside activities. This is the one big contest of the year for the Pack Rats. It is only 2 months away so get your antenna work done now while the weather is still with us.

* * *

SIX METER REPORT

By Rich Pattison, K3ACR

The end of September and here in October conditions are pretty much alike. With nets and local rag chews being most of the activity. Ground wave is good with WA3SKT/4 worked in Norfolk, Va. but generally activity could be better. With the upcoming space net contest, Dec. 15-23, six meters will be very active and an excellent opportunity to get on and check out equipment for the January 5 & 6 contest. It will be a good time to check out converters for potential problems of overload that could be solved with the necessary adjustments. The weather is now getting into the winter variety and we recommend doing that antenna work now. A good way to check out what you've done is get on work some of those western New York and New York City-Long Island stations that are on about 50.110 and always looking to the Philadelphia area for activity. Lots of SSB nets on Sunday mornings from 9:30 a.m. local time until noon on 50.175 also give us an opportunity to contribute to activity and get familiar with six meters. Looking forward to hearing everyone get on six now that fall is here and outdoor activities have subsided. The month ended very nicely with a fine 'E' skip opening that lasted for several hours with good signals from Florida west to Texas and north to Canada, which proves that six really jumps when the skip is in there. Among the stations worked were W0PFP, Jim in Ames, Iowa and WA5VEN, Les in Oklahoma City, Oklahoma. A couple of new counties were also worked one in Oklahoma and one in Missouri. Anyone who would like to join us in county hunting is welcome and it does add some interest in getting in there and spreading your RF around.

Happy Hunting, Rich

NEW PRODUCTS OF INTEREST TO HAMS

By Lyn, W3NSI

1. 2 Meter AM Transmitter: The Exceltronic Research Labs line of low power transmitters contains two units of interest to VHF operators. A 15 watt 6 meter unit is available for \$49.95, while the two meter transmitter runs about half that power and costs \$50.95 ready to go, less power supply. Four tubes used in either unit. 224-15 Linden Blvd. Cambria Heights, N.Y. 11411.
2. UHF Rec/Trans Converter - 432-450 MHz: The new SBE-450 TRC is designed to be used with a 2M FM transmitter receiver unit to gain access to the 450 MHz ham band. The transmitter section is simply a power varactor tripler good for 4 watts out with 10 watts drive in on 146 MHz. The solid state receiving converter has output on 146 MHz to feed the input of the FM transceiver. Unit may be used at the fixed station or for mobile operation. SBE (Linear Systems, Inc.) 220 Airport Blvd., Watsonville, California
3. Scanning Monitor Receivers: SBE has introduced a line of Lo, High, and UHF monitors called the Sentinel Series. It should be possible to adjust any of these units to cover the 50 Mc 155 Mc and 432 Mc ham ranges. All 6 receiver types may be operated on either 12VDC or on the AC line and are rated at .5 microvolt sens. for 20Db quieting. All units can be set up for a priority channel.

* * *

VHF/UHF REPORT

By Jo, W2EIF

The six meter band continues to show low activity, now that the E skip season is definitely over. The openings this past summer have been fewer than normal by all reports. This may be partly due to poor activity since the band has been open a number of times and there was no one on. Similarly, activity on 2 meters is low but to me it is better than 6 meters. There is even an indication that the big shift to the FM bands may have reversed a little. There was a good opening in the middle of October. The 2 meter band was open as well as the upper bands. I was able to work W4FJU (Va) and W3BSV (Md) on 1296 Mhz with very good signals. Signals were so strong that W4FJU relayed my 1296 signal on 2 meters to KLSAK in Rhode Island. The exhibit van that K1SFF/3 set up at the Pack Rat Hamarama was a big hit. A number of the people viewing the Pack Rat "Home Brew" projects requested that information about the projects be sent to them. Don't forget the Space Net Contest coming up in mid December. It is an excellent time up for the January VHF Contest. It isn't necessary to spend a lot of time on it. Just a few hours each day to make sure your gear is working OK and that you still know how to operate it since last January.

* * *

OFFICIAL BULLETIN NR 446 FROM ARRL HEADQUARTERS, NEWINGTON, CT. SEPTEMBER 27, 1973 TO ALL RADIO AMATEURS BT: ARRL is pleased to announce a new ten meter contest to take place 1200 GMT December 15 to 2359 GMT December 16, 1973. As recommended by the ARRL Contest Advisory Committee, the activity is open to, and contacts are permitted with, all amateurs worldwide. DX may work DX. No time limit. Double points for QSOs with novices. A station may be worked once on cw and once on phone. Two points for each complete contest and the multiplier is the sum of states, Canadian call areas, countries and ITU regions in the case of non land based stations. Full rules will appear in the November issue of QST. Please help disseminate this information in an effort to improve occupancy of ten meters. AR

OFFICIAL BULLETIN NR 448 FROM ARRL HEADQUARTERS NEWINGTON, CT. OCTOBER 11, 1973 TO ALL RADIO AMATEURS BT: October 15 marks the first anniversary of the launch of Oscar 6, the world's first long-life amateur satellite. According to Amsat, the Radio Amateur Satellite Corporation, over 1500 different stations in all states and at least 70 countries have communicated through Oscar 6. Three operators have contacted all states using the satellite. With the success of Oscar 6, amateur satellites have become a continuing feature of the widening world of amateur radio communication. ARRL congratulates Amsat on this important anniversary and affirms its continued support of the amateur satellite program. AR

"HAMARAMA '73"

By Dave Zimmerman, W3ZD

The second annual Packrat flea market and auction was such a huge success that one hardly knows where to begin, so lets start with the raw statistics. There were 598 paid admissions of whom 33 did not drop their stubs in the box for door prizes, 85 flea merchants, 58 outside tailgating and 27 inside with tables, 3 engravers making nameplates (last yere there were none). A check with the food department ably handled by Betty Charles, head of the ladies auxiliary of the Warwick Fire Co., our hosts; showed that 70 pounds of hotdogs, 40 pounds of hamburger barbeque, and 10 gallons of soup were consumed, and every bit I ate was delicious. Quite an effort by a nice bunch of people. The committee functioned superbly, with every flaw which cropped up in the original planning eliminated by some one. Let me try to list the group who made this affair such a nice effort:

K3GAS, treasurer, packrat table captain, auction score keeper.

W3HK, public relations, ARRL booth.

WA2MWB, Secretary, ticket committee.

K3UJD, building and refreshment chairman, raffle director.

K3MKM, table chairman.

K3ZKO, ATV demonstration, talk-in.

W3HKZ, Talk-in, six meters.

K3IGX, parking director (we called him transportation director!)

K1SFF/3, exhibit chairman (what a fine show.)

K3JJZ, Auctioneer, parking, ticket sales.

W3CL, registration booth and keeper of the banner.

W2EIF, audio engineer.

WA3AXV, tail gate chairman, 146 Mhz talk-in.

W3CJU, ticket sales, assisted by WA3DJF.

W3FQD, out President, club table, and general assistant.

WA3HIT, talk-in and set-up. W2AXU, K3DLS.

WA3NGK, W3YXF, K3EOD, WA3NFV, K3KMN, W3KKN, K3IPM, K3ZSG, WA3IDQ - parking, ticket sales, set-up, clean-up and various other duties performed by all.

A special thanks to Sylvia XYL, W3CL, Florence, WA2WYE, XYL, W2AXU and Elsie, XYL of W3ALR for their fine duties at the registration and raffle table.

The auction by K3JJZ was a huge delight to many of us with many fine bargains. Some junk here and there, but also some nice material. Thanks to EL and his helpers for a nice job.

The Pack Rats would like to thank everyone who attended this, our second Hamarama, and I as Chairman would like to thank all the members who helped in the planning and running of the event. It is a pleasure to be associated with a group such as ours, and let us begin now to plan for a bigger and better Hamarama next year. And before I forget, lets thank the weatherman once again.

* * *

SPACE NET VHF CONTEST RESULTS APOLLO 10

September 15-16, 1973

On Sunday, October 14, 1973, the Space Net crew assembled at the QTH of Tony, WB2MTU in Sicklerville, N.J. to participate once again in a wonderful mini-hamfest.

Most of the get together was held outdoors with the usual fine refreshments made available by our gracious host and hostess. The South Eastern Penna. ARC had an unusual mobi display mounted on a truck - a complete Ham Shack on wheels. Videotapes were made and played back including those of past events. Trophy winners were called to the front to accept their plaques amid the cheers of the gang. Bob, WA3HOW who was convalescing in the Abington Memorial Hospital was unable to be present to accept his trophy or the one for his club (Warminster ARC). W3CL and his XYL, Sylvia visited Bob at the hospital the next day and made the presentation. Rich, K3ACR climbed to the top of Tony's tower and reported good visibility all the way into Philadelphia. No wonder Tony puts out a walloping signal on 6 meters. Slim WA2QPC and his XYL came down from Plainfield. It was nice to see them once again and in good health. WA3OQR and W3ETB were the official photographers. Trophy winners as follows:

SPACE NET VHF CONTEST RESULTS APOLLO 10
CONTINUED

CLASS I

1st Place - K3ACR, 27,876
2nd Place - WA6SBJ, 9856

CLASS III

1st Place - K1FJY, 27,104
2nd Place - WA3HOW, 19,402

CLASS II

1st Place - WA3PUL, 28,908
2nd Place - W3CL, 17,168

CLASS IV

1st Place - WA3JMM, 9636

Club Scores:

1st Place, Mt. Airy VHF Radio Club (Pack Rats) 136,310 (WA3PUL)
2nd Place, Warminster ARC, 45,250 (WA3HOW)

The next event is a 9 day continuous contest featuring Apollo 8 and 17 from December 15 thru December 23rd.

LATE FLASH: THE PACK RAT 220 REPEATER * * * LICENSE CAME THRU. CALL LETTERS ARE WR3ACD. FREQ. 222.98 MHZ INPUT, 224.58 MHZ OUTPUT.

TID BITS

Many thanks to Amil of A&G Radio and John Lopes of Ham Buerger for their fine cooperation in connection with Hamarama 73.

We welcome Dick Subin our newest member. He sure puts in a FB signal on 2 meters from near Atlantic City. K2EVW, Richard Subin (Dick) XYL-Ellen. 711 Shore Rd. Northfield, N.J. 08225 609-646-7388

Our condolences to Rich, K3HIN and his family on the recent death of his father.

Mike, WA3PUL, is working hard to get his rig going on 220 MHZ. Sez, he will probably have a 432 signal on by contest time.

George, K3KMN, a Board member, was recently transferred to Pittsburgh on a temporary basis we hope. Comes home on week-ends to be with his family.

Where is Lloyd, WA2KOI who did a FB job setting up the 6 meter station complete at this past June VHF QSO Party at Hilltown. Come out of hiding Lloyd - we still love you.

Jack, W2AXU and his XYL Florence, WA2WYE spent a pleasant number of days recently visiting with old friends up Cape Cod way.

A mysterious signal appeared on 6 meters reporting in on the Pack-Rat net. It was Doc Sharpe, W3CLT after an absence of 12 years. Net control was really surprised - thought he heard an echo.

Hey gang, get your questionnaires back to your coordinators. Rich, K3ACR is preparing the check-off list and needs the info.

Our friend Ed Clegg, W2LOY/3 was hospitalized recently. We wish him a speedy recovery.

Bob Patton, WA3HOW out of the hospital and back on the air in good voice.

Frankie, W3SAO and Mother Rat have recently become grand parents. Congrats. They are taking care of Harry's family until next Summer when his tour of duty with the Marines in Japan is finished.



Dues are due to the East Coast VHF SSB Association. Send \$2.00 to the Secretary WA2QPC, C.W. Tinsman, 12 Dekalb Avenue, Plainfield, New Jersey 07063

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



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Contact: Frank, K3GQC, Phone 215-436-
6051

SWAP SHOP

Doc, K3GAS, has a number of goodies
for the silent auction at our regular
meeting on November 15th. Bring money.

TO OUR ADVERTISERS:

A new ad page is being prepared for the January
issue. Please forward any changes in your
business card to the Editor.

FOR SALE: Motorola T-51, 60 Watt mobile
transceiver on 52.525 and 52.76/.64 (WR3ABE).
Unit. \$75. Complete with control head, speaker,
and cables.
Collins 75A2 receiver with central electronics
model B slicer, calibrator, and FM adapter. \$250.
Hallicrafters sky buddy receiver, \$10.
Contact: WA2MWB, Carl Barish
211 Millbridge Apts.
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(609) 627-4855

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(Continued on Page 11)

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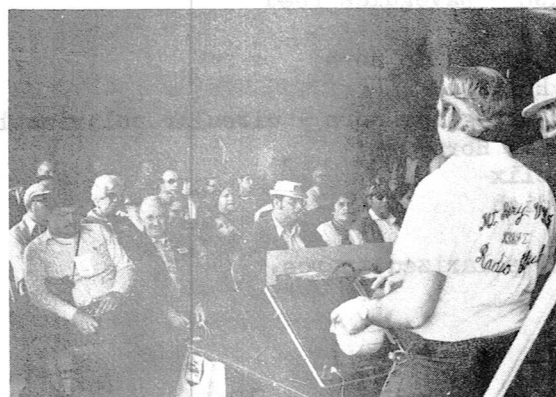
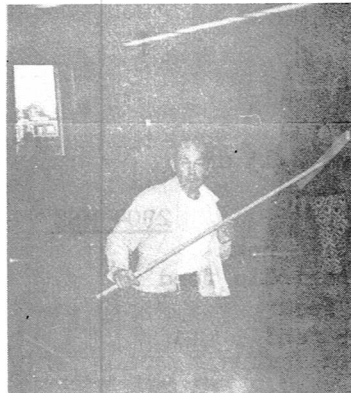
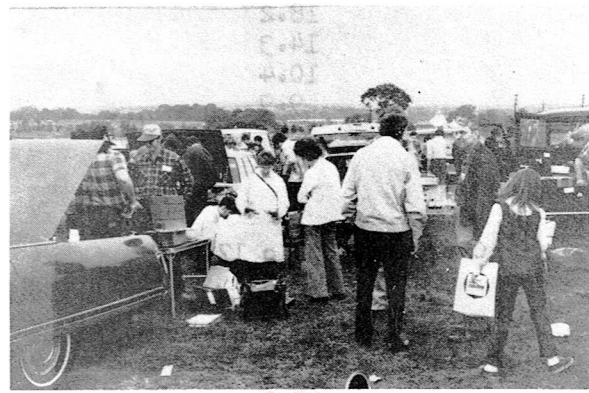
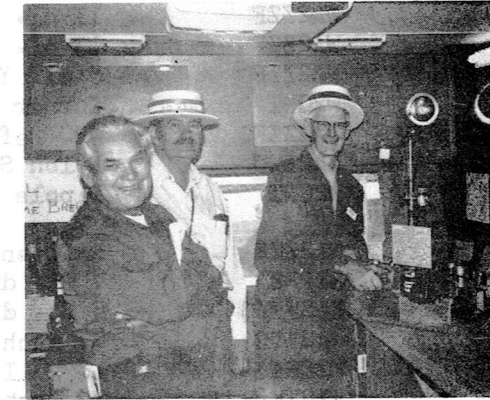
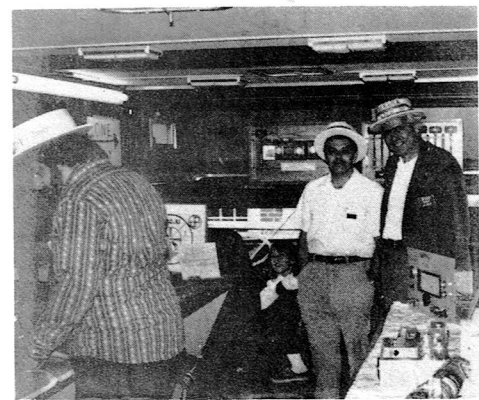
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EAST COAST VHF SOCIETY
SEVERNTH ANNUAL ANTENNA MEASURING CONTEST RESULTS
August 5, 1973

432 MHZ

| <u>Call</u> | <u>Antenna Description</u> | <u>Gain</u> |
|-------------|---|-------------------|
| K1SFF/3 | NSB Standard Reference Antenna | Over Dipole 7.7dB |
| K2RIW | 8 x 13 el. insulated Yagi | 23.2 |
| K2RIW | 4 x 13 el. insulated Yagi | 21.5 |
| W2GNI | 15 el. Yagi (W0EYE design - modified) | 16.0 |
| K1SFF/3 | 13 el. insulated Yagi (K2RIW design) | 15.9 |
| WA3AXV | 32 el. slot Yagis | 15.8 |
| K2KVT | 11 el. Yagi | 15.8 |
| K2RIW | 13 el. insulated Yagi | 15.3 |
| WA2TQI | 11 el. Tilton Yagi-modified-metal boom | 15.3 |
| W1SL | 14 el. Swan Yagi | 13.5 |
| K2UYH | Cylindrical parabola feed without reflector | 13.3 |
| WA2ZZF | 11 el. Tilton | 13.0 |
| WA2ZZF | 11 el. Tilton-modified-uniform direct or length | 13.0 |
| WA2ZZF | 13 el. Yagi (W2CCY design) | 11.0 |
| WA2ZZF | 8 el. Yagi | 9.7 |
| W2GNI | Corner Reflector | 9.5 |
| WA2ZZF | NBS Reference | 7.0 |
| WA2EWO | Pylon Slot | 5.6 |
| W2GNI | Dipole | 3.0 |

1296 MHZ

| | | |
|---------|------------------------------|-------------------------|
| WA2ZZF | Reference Horn | Over isotropic 15.4 dB* |
| K2PPZ | 7 ft. dish-log periodic feed | 28.4 |
| K1SFF/3 | 4 ft. dish-horn feed | 23.5 |
| WA2VTR | 42 inch dish | 20.6 |
| K2CBA | 16 x 11 el. Yagi | 20.4 |
| K1SFF/3 | 29 inch dish | 19.0 |
| WB2BYP | 32 el. collinear | 18.4 |
| K2YNT | 4 x 10 turn helix | 18.2 |
| W4JFU | 13 el Yagi | 14.3 |
| WA2EUS | 31 el Yagi | 10.4 |
| WA2EUS | 4 el Yagi | 9.9 |

* For gain over dipole, subtract 2.15 dB

2304 MHZ

| | | |
|---------|---|------------------------|
| K2RIW | Narda Standard Gain Horn | Over isotropic 17.0 dB |
| K2PPZ | 7 ft. dish-log periodic feed | 29.3 |
| K1SFF/3 | 4 ft. dish-horn feed | 26.5 |
| WB2IRX | 4 ft. dish-T-bar feed | 23.7 |
| W2CQH | 29 inch dish | 23.5 |
| K1SFF/3 | 29 inch dish | 17.0 |
| W1SL | Horn | 16.5 |
| WB2IRX | 4 ft. dish - Waveguide feed | 15.3 |
| WA2VTR | 42 inch dish | 15.0 |
| WA2ZZF | Circular waveguide horn | 15.0 |
| WA2ZZF | 32 turn Helix | 14.5* |
| WA2ZZF | Circular waveguide horn - circular polarization | 14.0* |
| WA2ZZF | Rectangular Horn | 13.5 |
| WA2ZZF | 6 turn helix | 12.0* |
| WB2IRX | 20 inch dish | 9.5 |

*Measured with circularly polarized source.

OFFICIAL BULLETIN NR 449 FROM ARRL HEADQUARTERS NEWINGTON, CT. OCTOBER 18, 1973, TO ALL RADIO AMATEURS BT: Denmark has opened up radio operating to visiting amateurs. Canada recognized reciprocity with Denmark effective September 10. The formal U.S. - Denmark agreement for reciprocal operating will become effective November 10, 1973. ARRL headquarters can furnish details to amateurs planning to visit Denmark. AR

OFFICIAL BULLETIN NR 450 FROM ARRL HEADQUARTERS NEWINGTON, CT. OCTOBER 25, 1973, TO ALL RADIO AMATEURS BT: November presents an excellent opportunity for every amateur to test his frequency measuring skills by taking part in an ARRL Frequency Measuring Test. WLAW will transmit signals for measurement on November 10 at 0230 and 0530 GMT. This will be the evening of November 9 at 2130 EST on approximately 3527 7078 and 14,079 kHz. A second series of test signals will be transmitted three hours later on about 3563 7083 and 14,072 kHz. Full details on how to participate appear on page 110 of October QST. AR

LANCASTER, Pa., October 18, 1973 . . . Three options are now available to amateur radio clubs across the country to either lease or purchase a 220 MHz repeater, announced Clegg at its Lancaster, Pa. headquarters.

In its continuing efforts to bring 220 MHz activity to radio amateurs from coast to coast, Clegg is now offering two lease options and one option to purchase its Model 016 self-contained, extremely reliable repeater. A duplexer is included.

Under option one, clubs may lease the 220 MHz repeater at a monthly rental of \$25.00 for 3 years with the purchase of 12 FM-21 220 MHz transceivers. Clubs will then have the right to fully purchase the repeater at \$500.00 at the end of the first year, at \$300.00 after the second year, and at \$100.00 at the end of the third year. Or secondly, a club may lease a repeater at a monthly rental of only \$15.00 for 3 years with the purchase of 35 FM-21 transceivers.

Clubs would then have full purchase rights at \$500.00 at the conclusion of the first year, at \$300.00 after the second year, and at \$100.00 at the end of 3 years.

The third option available simply enables clubs to buy the repeater for \$1,000.00 with the purchase of 12 or more FM-21 sets.

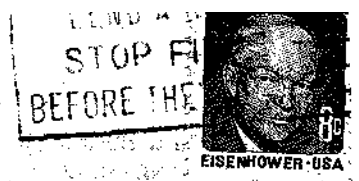
The repeater is leased complete (except antennae and feed line) with features that include automatic identification, all solid-state construction, and built-in-timers. It operates at 10 to 15 watts, uses a Phelps-Dodge duplexer, and has approximately 14u sensitivity. It includes an ac supply, local MIC, and metered signal strength.

The new FM-21 transceivers associated with the program have a unique triple-duty crystal feature, using just 1 crystal in any channel. One crystal provides a separate transmit and receive frequency as well as automatic 1.6 MHz programming in the repeat mode. It is the latest all-American made quality transceiver manufactured by Clegg.

All amateur radio clubs are invited to contact the Clegg Division or any Clegg Dealer if interested in joining or finding out more about the updated Clegg repeater program. Or, they may write Carl Jacobson, National Sales Manager, Clegg Division, International Signal and Control Corporation, 3050 Hempland Road, Lancaster, Pennsylvania 17601, or telephone him at (717) 299-3671.

In addition to the 220 MHz repeater and FM-21 220 transceiver, the Clegg Division also manufactures a quality 2 meter FM transceiver with crystalplexer frequency control (FM-27B), power supplies and accessories.

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| FRI. TO | TO | TO |
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