

PACK RATS'



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

CHEESE BITS



MT. AIRY VHF RADIO CLUB, INC., PHILADELPHIA, PENNSYLVANIA ARRL
 50.125, 144.150, 220.125, 432.110, 1296.110 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 19666

VOLUME XXXI

FEBRUARY, 1989

NUMBER 2

THE PREZ SEZ

The January 1989 Aurora Contest is over. I hope everyone had as much fun as I did.

Almost everyone at the January Meeting had a sad story to relate concerning the Contest. By far, Walt, WA3AQA had the saddest story of all. Congratulations Walt, on winning the coveted Crying Towel Award for 1989.

The Contest wrap-up meeting is Saturday, 10 A.M., February 4, at the home of Dave, W3ED. Please have your logs ready and either mailed to your Team Captain or bring it to the wrap-up session. All help will be greatly appreciated.

In a surprise move at the January meeting, Dave, N3CX, volunteered to be the Summer Contest Chairman. I'm sure Dave will do an excellent job and that we will be hearing from him soon to set up a meeting to pick a contest site.

Now for the bad news. Paul, WB3JYO, Contest Chairman, and Rick, WC2K, in conversations with the ARRL have found out that contest logs submitted for Club competition by members who have not attended 2 in person meetings will not be accepted for Club scoring. This includes handicapped members. The Board of Directors and Club members at the January meeting have decided that we are going to submit all logs from members on our active membership list and to pursue this matter with the League. We are sure that this is an oversight on the part of the ARRL Contest Advisory Committee. In our opinion, provisions must be made for active handicapped Hams to participate in ARRL sponsored Club competitions.

The February Meeting is our annual Homebrew Night. This is one of our most popular Club meetings of the year because it is the membership that makes it work. Bring your projects big and small and see what others have built during the past year.

See you at the meeting,

Bob, N2SB

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DEADLINE FOR ARTICLES IS THE GENERAL
MEMBERSHIP MEETING: THE THIRD THURSDAY
OF THE MONTH. SWAP SHOP ITEMS - NO CHARGE

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MONDAY NIGHT NETS

7:30 PM - 50.125 MHz
8:00 PM - 144.150 MHz
8:30 PM - 220.125 MHz
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9:00 PM - 432.110 MHz
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CALENDAR OF COMING EVENTS
By Harry Brown, W3IIT

FEBRUARY

- 4 VHF Contest rap-up session at QTH of Dave Zimmerman, W3ZD, Warminster. Logs must be submitted to team captain or WB3JYO prior to this day. Late scores should be phoned into 215-675-4539 on Saturday.
- 5 Limarc Hamfest, Mellville, NY (Long Island).
- 6 New Moon.
- 7 EME Perigee.
- 9 Pack-Rat Board of Directors Meeting, 8 PM at QTH of Harry Stein, W3CL. 215-887-5052 for directions.
- 14 St. Valentines Day - Show the XYL's/YL's that the Pack-Rats are world champion lovers too!
- 16 Pack-Rat General Meeting, Southampton Library 8 PM. Annual Homebrew Night - bring successes, failures, projects under construction, etc.
- 18-19 ARRL International DX Contest. See December 1988 QST, page 103 for details.
- 20 Total Lunar Eclipse.

MARCH

- 12 DVRA HAMFEST, 112th Field Artillery Armory, Eggent's Crossing Rd., Lawrenceville, NJ. 146.67 talk-in.

VISITORS - JANUARY 19, 1989 MEETING

W3AJS	- Charles E. Keener	- Orland, PA
W1BZ	- Vic Aijala	- Annapolis, MD
N6JH	- Jerry Hinshaw	- Towson, MD
W3UBO	- Frank Ford	- Telford, PA
	- Marty Wexler	- Philadelphia, PA

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PROPAGATION REPORT
by Paul Drexler, WB3JYO

The month of December was rather quiet, with no outstanding propagation or openings that I am aware of. Things have improved a bit however during the month of January. A brief aurora was reported to have taken place on January 11th on 6 meters - no other details on the intensity or duration of the aurora were given. On January 12th, 6 was open most of the afternoon to the Midwest, the West Coast, and South America. Stations running modest power were S9++ in our area (tqx W3KKN).

Band conditions during the January VHF Sweepstakes, on the weekend of the 14-16th, were judged to be average or less than average during most of the contest. Many of the contest scores would have been down from last year had there not been over 2 hours worth of aurora Sunday evening from 6 thru 432! The number of grids to be worked to the Midwest seemed to be limited only by operating skill and your ability to quickly log new stations worked. There certainly was no shortage of activity (at least on 6 and 2) during this aurora! That's all I have to report. CU on the bands!

DAYTON VHF/UHF PROGRAM

Antenna gain measurements and preamp noise figure measurements will again be a part of the VHF/UHF program at the Dayton HamVention for 1989. And talks on popular VHF/UHF topics are scheduled for Saturday (more details will follow).

The noise figure measurements will be held on Friday evening at the HamVention site, next to the FM B*A*S*H* area (where food, drink, and entertainment is available). And the antenna gain measurements will again take place on Sunday morning at Meadowdale High School (3/4 mile from the Ham Vention - with continuous shuttle bus service provided).

The goal this year is to provide more prizes to antenna gain entrants (both commercial and homebrew), so plan to bring your antennas.

Is anyone planning a VHF/UHF gathering for Saturday evening in the Dayton area? If so, make sure it gets publicized during the Friday evening noise figure measurements, and during the forum on Saturday.

For more info, contact me: Joe Burke, WA8OGS, 9168 Brehm Rd., Cincinnati, OH 45252 513-385-4198 (H) 513-629-8227 (W)

TID BITS

-Received a letter from Randy, WB2SZK, one of our West Coast members. Randy and Della doing a lot of skiing and bike riding. Sends his 73 to the gang.

-Doc, K3GAS, received a note from Jim Ward, WA3AAJ, our San Diego, CA Pack-Rat. Says that ham radio has been hampered by strong regs banning antennas. He says he sure misses the Club meetings and the January VHF SS. Sends his regards to the Pack-Rats.

-Greetings from K3ZCY (FM09) and ex-Pack-Rat from 22 years ago. He subscribes to Cheese Bits and enjoys it very much. TU Ed. He operates 144, 220, 432, 1296, 2304 - boy we could use his score - Hi - Good Luck Ed.

-Tony, W3HMU (an ex-Prez) is back again with activity once again. Keep up the good work, OM.

-Little Carl, K3DLS did a fb job mobiling and worked a large number of Pack-Rats during the Contest.

-Congrats to Walt, WA3AQA on winning the "Crying Towel". Did you remove the scratches from the kitchen table - and how is your back, Walt, OB?

VOTED TO RETIRED STATUS

K3VYG - Gordon Vogt

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just back from the factory!!

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A NOTE FROM DOC, K3GAS: All my
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9.4 GHz easily). They run on 7.5 VDC, and include a separate detector diode to
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(w/SMA's and coax) \$20; ROUND-HORN UNITS (lightest) \$20; TINY JAPANESE-STYLE
(very short horn, ting) \$30, (Japanese style comes complete with new case and PC
board, already working as an intrusion alarm. Not certified! NEW!) 6 GHz STUE
All are rectangular waveguide items, 1.37" x .62", with flanges where applicable
including postage! Waveguide-to-SMA transition \$25; Wave-guide, rigid, about 36
long, new \$20; 2 lb. assemble, with vane attenuator, several corners, elbows,
and straights, with flanges \$15; Waveguide terminations, ferrite-cone \$20;
Flexible waveguide, various lengths, used \$20; Rectangular-to-Eleptical transi-
tions, some new, all OK, some with Andrew eleiptical stubs still attached \$20.
INFRA-RED STUFF: Racal model IR-773, Interior 35 ft. sensor, new w/instructions,
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and prices. I DON'T WANT THEM!! SHF MICROWAVE SUPPLY, 7102 W. 500 S., LA PORTE
INDIANA 46350 ALAN RUTZ WA9GKA.

FIGHT FOR 220 MHZ UPDATE - DON'T TRIM THOSE ELEMENTS YET!
From ARRL Letter

The ARRL has formally requested the FCC to schedule oral argument before the FCC Commissioners concerning Docket 87-14, the FCC ruling which takes away 220-222 MHz from the Amateur Service.

In a strongly-worded request, the ARRL said that the Order in 87-14 "faile utterly and completely to take into account the inability of the Amateur Radio Service, for technical reasons, to reaccommodate the thousands of displaced users" from 220-222 MHz to 222-225 MHz. The ARRL also said that the "devastating" loss of 220-222 MHz on the development of national data communications "has never been adequately conveyed to the Commissioners," and the economic effect of this loss has also been "misunderstood" by the Commission.

Our request quotes Public Law 100-594, which states that "government agencies shall take into account the valuable contributions made by amateur radio operators when considering actions affecting the Amateur Radio Service" and points out this legislation clearly warrants the Commission to consider the result of the reallocation on the Amateur Radio Service, the future of the amateur packet radio and voice repeater networks, and the effect of 87-14 on the ability of the Service to render emergency communications.

The ARRL request concluded: "Oral argument will permit the League to present, in concise fashion, the truth about the effect of the reallocation on the Service and factual data on the subject which has not thus far been adequately conveyed to the Commissioners."

Section 1.423 of the Commission's rules provides for oral argument in rule making proceedings if the Commission determines it is warranted. It is not known at this time if and when the Commission will consider the request.

QCWA INFORMATION

Chapter 5 of the Quarter Century Wireless Association would like to extend an invitation to all amateurs that qualify in your organization, to join the Chapter. Those hams that have held a license for 25 years are eligible to join the national organization and a chapter. Anyone wishing to apply for membership can contact any Chapter 5 member or send a request to the secretary of Chapter 5 - Don Field, W2UAE, 101 Denow Rd., Lawrenceville, NJ 08648. Information about joining the National and Chapter 5 will be sent.

TRI BAND VHF/UHF MOBILE ANTENNA

Three popular VHF/UHF bands on one mobile antenna is the idea behind the new Metropolitan Tri-band antenna from Austin Custom Antennas. While less than 18 inches long, the three section Metropolitan has the ability to function as a 1/4 wave on 2 and 1 1/4 meters and a 3/4 wave on the 70 cm band. Tuning and matching components are sealed inside the antenna and no external adjustments are necessary. The price class is \$40 from Austin Custom Antenna Company, P.O. Box 357, Sandown, NH. 03873. Tnx Westlink Report.

EPA WILL NOT ISSUE RF EXPOSURE GUIDELINES

The Environmental Protection Agency (EPA) no longer plans to issue federal guidelines for public exposure to radio-frequency and microwave radiation during the 1989 and 1990 federal fiscal years. In 1986 the EPA had outlined four options for nonionizing radiation risks, and held a public hearing on the subject. These options, which did not appear to affect radio amateurs, are outlined in August 1986 QST, page 51. Tnx ARRL Letter.

J52US 6-METER UPDATE
by Joe Burke, WA8OGS

Dave Heil, J52US, started operating on 50 MHz from Guinea Biseau (western tip of Africa) in December 1988. And he worked over 200 U.S. stations during his first noth on the band!

Dave is running only 7 watts to a 3 element yagi that he presently turns manually. All contacts so far have been made on cw. But Dave will be on SSB soon, and with more power. A Lunar amplifier and a microphone for his Yaesu 620B were shipped shortly after the rig.

The first U.S. QSO's made by Dave were on December 11 with K1TOL, WA1OUB, K1JRW, and W2CAP/1. K8WKZ was also heard, but a contact was not completed. Several openings have occurred since, with the best being on Christmas Eve and Christmas Day, when many W6's and W7's were worked.

Members of the Midwest VHF/UHF Society started the drive to get a rig to Dave. But things moved slow until VELYX and SMIRK got involved. K5ZMS shipped the Yaesu FT620B (that belongs to SMIRK) to WA8OGS. Terry Price, WD8ISK, then made the necessary repairs to the rig. And off it went to J52US, only to be returned about ten days later. (The Washington address would not accept an insured package, unknown to us). Once the nine digit zip code was obtained, the rig was shipped via UPS to the Washington P.O. Box, and it went on to Dave OK.

John Walker, WB8IGY, provided the Lunar Amp. Red Schuster, K8VVV, ordered a pair of new (expensive) transistors for the amp. And WD8ISK again did the repair work. Thanks also to WB8BKC and NØLL for their contributions.

J52US will be leaving Biseau late in 1989. His next assignment will probably be either 9L or TL! Dave works for the U.S. Department of State, which normally gives two year assignments in foreign countries. Dave's stateside call is K8MN, and he is from the Cincinnati area.

A SASE to Dave's QSL manager is mandatory if a quick reply is desired. Otherwise QSL's get returned via the bureau. The manager for J52US is: Ken Scheper, WA8JOC, 5875 Cedaridge Dr., Cincinnati, OH 45238.

With the good F2 openings on 50 MHz already in December 1988, the upcoming sunspot peak looks like another wild one! Who will be the first to get DXCC on 50 MHz?

220 MHZ DISTANCE RECORD FALLS

The old distance record of 1181 miles set in 1982 by Al Ward, WB5LUA, and Peter Shilton, VE3EMS, fell to the advances of two challengers recently.

The new record of 1289 miles was set September 9 by Richard Roderick, K5U1 Little Rock, Arkansas, and David Olean, K1WHS, West Lebanon, Maine, besting the old record by more than 100 miles!

Roderick utilized a Kenwood TS-520 with a transverter and GaAsFET preamp, and an amplifier at 135 watts. The antenna was a single 17-element Boomer at 90 feet. Olean used a Kenwood TS-820S with transverter and 1-db NF preamp, and an 8877 amplifier at the legal limit. His antenna system consisted of four Boomers. Tnx ARRL Letter.

MORE TID BITS

-Thanks to Bruce, WA3YUE and Dave, WA3JUF for some great contest operating tools this year. Bruce produced the new, concise Pack-Rat log sheets and Dave distributed lists of active Rats per band-a big help in working all members on all bands.

-Don't forget to complete your Rochester VHF Group check-off sheets by extracting the RVHFG calls from the log. Award will be presented soon.

902 MHZ EME DISTANCE RECORD SET

By Dave Halliday, KD5RO

On 27 November, 1988, I worked Al Ward, WB5LUA, on 902 MHz EME (Moonbounce) from my QTH to establish what we believe to be the World's best DX to date on that band, 1239 miles. I had been working for some time to complete my EME station and this was the culmination of those efforts. My station consists of a 10 foot TVRO dish modified for Az-El positioning and mounted on a single section of Rohn 25G tower. It is turned with a small prop-pitch motor and elevated with a standard TVRO actuator arm. I have digital readouts in the shack which display both azimuth and elevation, so I don't need visual sighting of the moon. For this QSO, my transmitter power was 220W from a borrowed HI-SPEC amplifier—the only completely commercial piece in the station (thanks to N2WK). My preamp is also home-built, with a 0.43 dB noise figure and about 15 dB gain. The transmit feedline is a similar length of 1/2" Helix. My transmitter is completely home-brewed and uses 2M as its I.F. With this setup, I consistently measure about 13 dB of Sun noise. The dish feed is a dual-dipole with reflector design, similar to one presented by W0PW several years ago for 1296 and scaled up for use at 902.

WB5LUA has a 24 foot home-brew dish which he uses on 432 and up for EME and was one of the first to put a 902 MHz signal on the moon and worked K5JL in Oklahoma. Al has about 170W from a TWT and gets reasonable echoes with his setup. His feedline on transmit and receive is similar to mine, but somewhat longer. His receive preamp is also the same. Of course, with the larger dish, he observes more Sun noise with his system. Al's feed is the same type as mine.

My efforts were directed toward the goal of working Al and hopefully making at least 1 QSO during the second weekend of the ARRL International EME Competition. A lot of very concentrated effort was put forth in the last 48 hours before my schedule with Al. It always seems that the first 90% of a task only takes 10% of the available time, and that the remaining 10% of the job takes AT LEAST the remaining 90% (if you're lucky). So it was in this case. Fifteen minutes before our schedule, I still hadn't tried for echoes and wasn't really sure it was going to work. I was very lucky—I hit the key, sent a string of dahs and went to receive. There they were, weak but copiable, about 1 - 2 dB out of the noise! I plan to increase my transmitter power to about 400W when (and if) I can find a replacement 3CX400U7 tube for my surplus cavity amp—this will double the strength of my echoes, making it easier for other stations to hear me.

We had decided to start at 0615Z on 27 November and planned to run for at least an hour, allowing more time if it was necessary. After the first half hour of barely detectable signals, Al decided to rotate his feed 90 degrees to account for spatial polarization (NOT Faraday) and after that, the QSO went beautifully. I heard his signals about 3 dB out of the noise - not strong but good copy. My own echoes were easily found, but were easily found, but were weaker than Al. I would estimate them at 1 - 2 dB out of the noise.

This record will probably (hopefully?) not stand very long. As more amateurs become active on 902, this 1239 mile distance is sure to be extended.

FINAL TID BIT

-Pack-Rat participants of the 1989 VHF SS will receive a commemorative gift from the Club for their effort. The Contest/Award Committee should have these items soon for distribution.

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