

PACK RATS'



CHEESE BITS



CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

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

50.125, 144.50, 432.110, 1296.025 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

ARNS

VOLUME XXIII

JULY, 1981

NUMBER 7

THE PREZ SEZ

CQ Contest, CQ Contest - it's still ringing in my ears from last weekend's June QSO Party. As usual, we went out to have fun and to win. I know we had fun, but we'll have to wait a while for the unofficial results to filter down our way. Congratulations to Bill, W3HQT and the contest crew for the fine effort. Conditions are something we always complain about (after all this wasn't any aurora or 2 meter E skip) but we had a fantastic section count equalling or bettering our sections on most of the bands thru 2304. And on 2304 Mhz we broke by a margin of X10 or so our old DX distance with the working of W2SZ/1 on Mt. Graylock in W. Mass. This should open up the use of 2304 a bit now that everyone knows it can be done. Wait for the Mid-Atlantic States VHF Conference in October and W3HQT will show how to roll your own 2304 Mhz solid state rig using pc board construction.

Bring that idle gear to Zimmermans Glen on July 16th. Dave, W3ZD, is hosting the first outdoor meeting of the season with the White Elephant Sale/Auction being the primary attraction. In addition to the boat anchors that get passed around from year to year, there are lots of items that really work that we no longer need. Bring em to the meeting so someone else can get some good use from that dusty equipment you no longer use.

Hope everyone is enjoying the summertime 6 meter openings. They're a lot of fun and there's still a bit of dx available with the always possible surprise of something unusual happening at almost any time.

73, Harry, W3IIT

* * * *

CONGRATULATIONS TO THE SOUTH JERSEY RADIO ASSOCIATION (SJRA) ON THE CELEBRATION OF THEIR 65TH ANNIVERSARY.

* * *

THE UHF CONTEST

Starts 1900 UTC on Saturday August 8 and ends at 1900 UTC on Sunday August 9. On all amateur bands 220 MHz and above. 430 MHz limited to 430-433 MHz. Send and receive an exchange of signal report plus either a four or five digit number indicating the station position in longitude and latitude. 220 and 430 MHz worth 3 contact points - 1296 MHz worth 6 points and 2304 and higher worth 12 points. For additional details see July 1981 QST. PACK-RATS ARE URGED TO PARTICIPATE - IT IS A FUN CONTEST.

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SWAP SHOP ITEMS - NO CHARGE

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

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215-355-5730

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W2EIF, JOSEPH KILGORE
609-783-9478

CLUB HISTORIAN:

W3CL, HARRY B. STEIN

<u>MONDAY NIGHT NETS</u>	<u>NET CONTROL</u>
7:30 PM - 50.125 MHZ	W3CL
8:00 PM - 144.150 MHZ	W2EIF
8:30 PM - 222.98/224.58	K3GAS
9:00 PM - 432.1 MHZ	K3IUW
9:30 PM - 1296.025 MHZ	W3CXU

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DIRECTORS:

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WA2DPU, BILL SMITH (2yrs)
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CALENDAR OF COMING EVENTS

Syllabus by Lee, K3MXM

JULY

- 1 BATTLE OF GETTYSBURG -- Turning point of the War between the States
- 1 Canada Dominion Day
- 4 The Harrisburg RAC Annual Firecracker Hamfest, Saturday 7/4 - Shellsville VFW Picnic Grounds, Exit #27 off I-81 North 1 mile from exit.
- 4 Display your Flag proudly today - July 4th. Attend a parade, have a picnic, watch the fireworks
- 9 Board of Directors Meeting, QTH W3HQT, Bill Olson, Green Lane, Pa. 18054. Phone: 215-257-1739
- 8 Liberty Bell Cracked in 1835. Tolling for the funeral of John Marshall
- 11 Mount Nittany Ham Festival. Info NARC, Box 614, State College, Pa. 16801
- 12 Batavia, N.Y. Hamfest. Info GRAM, INC., Box 572, Batavia, N.Y. 14020
- 12 BARC Hamfest, Pocono Downs Racetrack, Wilkes Barre, Pa. Info: 717-823-3101
- 16 The very first outdoor meeting of the season, AUCTION TIME. Zimmermans Glenn, 520 Centennial Rd., Warminster, Pa. Bring all your goodies and watch them move from your cellar to someone elses cellar. Refreshments, a good time is in store for everyone. Bring all your buddies along.
- 16 The very first parking meter ever used was installed in Oklahoma City in 1935. Seems like we have been feeding the nickle and dimes for a century and it is only 46 years!?
- 17 Television invented in 1926 - right here in the Delaware Valley!
- 19 WJRA Hamfest, McGuire AFB, Wrightstown, N.J. Info: Jack, WA2RHJ
- 25 Mt. Beacon Hamfest, Info: WA2OYC, Poughkeepsie, N.Y. 12603
- 26 Friends of WR3ABE Picnic, Noon. Ft. Washington Park, Flourtown, Pa. Bring family & food.
- 26 BRATS Hamfest, Howard County Fairgrounds, Baltimore, Md. Info: BRATS, P.O. Box 5915, Baltimore, Md. 21208

* * *

VISITORS JUNE 18, 1981 MEETING

N3BBI, Mike Pandolfo - Croydon, Pa.
WB2UVB, Gene Bond - Moorestown, Pa.
KA2CQX, Janice Bond - Moorestown, Pa.

WB3EFO, Edwin Lee, Huntingdon Valley, Pa.
W3AJS, Ed Keener, Oreland, Pa.

CHANGE OF ADDRESS

W3NSI, Lyn Rowland - XYL Sally
926 Tustin Street
Phila., Pa. 19111
215-742-7695

N3EG/6, Earl Garber
446 W. Harvard Street, #7
Glendale, CA. 91204
213-507-8195

NEW PRODUCTS OF INTEREST TO HAMS

By Lyn, W3NSI

1. CENTURION DUCK ANTENNA: The very compact Mini-TUF Duck 1/4 wave antenna is being sold by the Centurion Co. The unit is a continuously loaded 4" high HT whip with a BNC connector. This is shorter than the usual 8" length available for this use. Price \$8. P.O. Box 82846, Lincoln, Neb. 68501
2. IMPULSE SUPPRESSOR (LIGHTENING ARRESTOR): Polyphaser Corp. has a product on the market that could do a much better job in preventing lightening damage than the usual run of arrestors that are available to hams. The IS 50 U is made of aluminum coated for salt water marine use. Connectors are teflon insulated to avoid cracking. The unit is rated at 10,000 amps surge, and will suppress this buildup in less than a microsecond. Price \$40. 1500 West Wind Boulevard, Kissimmee, FL. 32741
3. BRIGHT COUNTER: The A 500 counter covers the range of 50 Hz to 500 Mhz and is rated at .1PPM over the normal 17-40 c temp. range. Sensitivity is rated at 10 MV at 50 Mhz and 50 MV at 500 Mhz. A nine digit LED readout is used on this wired and tested unit. Price \$219. P.O. Box 76972, Atlanta, GA. 30328

* * *

VHF/UHF REPORT

By Joe, W2EIF

The six meter band has been very good this Spring. It started a little slow but has made up for it in quality and quantity. May produced some good openings with South America (Argentina) in late May. There have been some West Coast contacts and the band was really alive with respect to the June QSO Party. A record number of sections must have been recorded in the Eastern States. June 16 and 17 produced another opening to Argentina from the East Coast and a lot of LU contacts were made. As I write the band reopened from Florida around to Q1an². Two meters and up have not shown any unusual activity that I am aware of here. The contest produced good signals all the way up to 1296 and higher. There were at least 20 sections or more available on 2, 220 and 432 and 10 or more on 1296 and above. Keep monitoring the band on 2 meters there should be some Es during the next week or so.

NOTE: WA3AXV, N3AHI, W2AXU and K3KTY worked LU's during the week of June 15th - reported at the June 18th meeting.

* * *

ANNOUNCEMENT

The Holmesburg Amateur Radio Club has recently completed installation of the new repeater on 146.685(-600) located at the University of Pa., 39th & Walnut Sts., in Phila. The repeater is a Motorola Micor unit running about 80 watts and the antenna is a Phelps Dodge station master up over 200 feet from street level. Autopatch feature is available for members for a wide coverage area of Phila. and outlying areas. On Thurs. evenings at 7:00 PM the club bulletin net meets and at 8:00 PM a traffic net is held. Chaverim of Delaware Valley meets on this repeater at 9:00 PM on Tues. evening. If you would like further information, club meetings are held on the first Sunday of each month at the Macedon Diner on Frankford Ave., North of Cottman Ave. or drop a note to H.A.R.C., P.O. Box 6253, Phila., Pa. 19136. 73

* * *

ARRL BULLETIN NR 66 FROM ARRL HEADQUARTERS NEWINGTON CT JUNE 18, 1981 TO ALL RADIO AMATEURS BT: AMSAT has requested that no one attempt to use AMSAT OSCAR 7 until further notice. Anyone hearing the OSCAR 7 spacecraft should call AMSAT or ARRL Headquarters. The satellite was last heard on 13 June 81. It is believed to be in mode D recharge because of an undervoltage condition caused by minimum sunlight available at this time of year. The spacecraft condition can only be determined by reports of telemetry. When the battery voltage builds back up in a few weeks, ground command stations will attempt to bring up the 435.100 MHz beacon. Any lat breaking news will be announced on AMSAT nets and WLAW bulletins. AR

SWAP SHOP

FOR SALE: Viking II & 122 VFO with books \$75.00. SB-33. 80-15 mtrs. SB w/DC converter \$135.00. NCX 5 - \$150.
CONTACT: WA3IWT, Rich Prim
Phone: 215-355-1192

FOR SALE: Kenwood TS-700SP all mode 2 mtr. transceiver excellent condition with manual \$450.

CONTACT: WB3KAG, Mario Nicosia
Phone: 215-342-9954

FOR SALE: Drake C4 Console-this accessory includes 5 antenna remote coax switch, watt and SWR meter, phone patch, timer, Ham-M rotor control. Excellent condition, and complete. Regency 9 channel-scanner for aircraft band, excellent condx. includes 9 xtals.

CONTACT: K3UKW, Tony Masero
Phone: 215-271-8898

FOR SALE: Skis w/bindings and size 12 boots - 190 Cm \$100. 2 ele. triband quad \$40. U-fix it color TV \$5. Radio console \$200. 6 m 6 ele. Yagi hygain \$50. 2M 4.2λ NBS \$25. 2 - GE 19"x6" cabinets \$15.@. 2-Motorola 19"x6" cabinets \$10@. 1-19"x7" cabinet \$10. 6db 450 Mhz stationmaster \$50. 6M 4CX250 amp \$40. 2M 4CX250 amp. \$30. Signal generator-15-400 Mhz AM-FM-CW w/scope \$50. 2-GE 450Mhz monitor receivers \$50@. Federal 30-40Mhz portable \$300. N.Y. TV Ant. \$15. CB pager system \$50.

CONTACT: WA3WAS, Steve Simons
Phone: 215-672-6486

FOR SALE: Drake 2A receiver and Q Multiplier/ Speaker box \$125.00.

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

* * *

AMRAD RECEIVED 6/18/81: AMATEUR RADIO RESEARCH & DEVELOPMENT CORPORATION 1981 May 22
For Immediate Release:

CALL FOR PAPERS ON PACKET RADIO AND COMPUTER NETWORKING:

The American Radio Relay League is sponsoring a conference on Amateur Radio Computer Networking on October 16, 1981 at the National Bureau of Standards, Gaithersburg, MD. The purpose of the conference is to explore the possibilities of an integrated amateur computer network using HF, VHF and satellite packet radio as the primary transmission means. The network would consist of radio amateurs in both the U.S and Canada and would provide means of servicing the public by handling third party traffic. Papers are sought on both technical and operational topics including: network structure, protocols, message handling, equipment design and selection, software, integration with the National Traffic System, interconnection with Computerized Bulletin Board Systems, and other topics. This event will be hosted by the Amateur Radio Research and Development Corp. (AMRAD) and by the Radio Amateur Satellite Corp. (AMSAT) whose annual meeting will be held on October 17 at the nearby Goddard Space Flight Center. Those wishing to present papers should send a letter of intent to Paul L. Rinaldo, W4RI, President, AMRAD, 1524 Springvale Ave., McLean, VA 22101 before Aug. 15, 1981.

* * *

TID BITS

The best turnout in years for the June VHF QSO Party at the multi-op station W3CCX/3 in Hilltown, Pa. looks like a very FB score was achieved with over 1300 contacts and about 142 sections. Retirees W2EIF, W3AJF & K3VYG were joined by K3KTY in a tent pitching effort and the delivery of essential materials. Gary Dallas, WA1YHO/6 came from the West Coast and participated for the entire week-end. A visitor from England G8UMG, Jerry Wyche spent some time observing the operation.

Randy Bynum, WB2SZK/6 was East on business and joined us at the board meeting at K3NHX QTH. (Looked real sharp - West Coast agrees with him!!)

Congratulations to the new officers for the 1981-1982 term as follows: Pres. W3IIT, V. Pres. K3KTY, Cor. Secy. W3ZD, Rec. Secy. K3IGX, Treas. KeGAS. Directors for 2 yrs. WA3JUF, WA3NUF.

(CONTINUED ON PAGE 6)

SEVENTH ANNUAL EASTERN VHF/UHF CONFERENCE SUMMARY, MAY 15-17, 1981

By Joe Reisert, W1JR

Almost 100 VHF/UHFers from 5 USA call areas and all provinces in VE1,2&3 attended this years conference at the Sheraton Inn in Boxborough, Mass. Talks included: "The Emerging Bands, 220 and 1296 Mhz" by K1LPS, "Putting Quadrature Hybrids to Work" by W1OOP, "Lossless Feedback Amplifiers" by Dr. David Norton of Anzac Electronics, "How to Measure Antenna Gain" by WA2ZZF, "How to Predict Tropo Openings" by K1FJM/4, "Ionospheric FAI Propagation on 144 Mhz and Above" by K4GFG, "Microwave (10 GHz) SSB" by KA1GT and "VHF in Other Countries" by K1ZZ.

Two new conference innovations were well received, namely the rap sessions on the various VHF/UHF bands (held at the same time as the main program), and the VHF/UHF IQ Test which was won by K1FWF scoring 50 out of a possible 51 points. Many other topics were also discussed at the other informal gatherings in and out of the hospitality suite.

The noise figure measurements produced no real surprises. Lowest noise figures were as follows: 144 mhz-1.5 dB with a Dixel D 432 GaAs FET by VE3FN, 220 MHz-1.1 dB with a Dixel D 432 GaAs FET by W1UHE, 432 MHz-0.5 dB with an NEC V244 GaAs FET by W1JR and a Dixel D 432 GaAs FET by W1UHE, 1296-1.2 dB with an NEC 21889 GaAs FET by KA1GT and 2304 MHz-2.0 dB with an NEC V645 by W1OOP.

The antenna measurements did produce some real surprises. 70 cm was led by a new experimental Cushcraft "Boomer" yagi by K1WHS with a gain of 16.9 dBi. This was followed by a 4 way tie with 16.6 dBi gain between a stock K2RIW 19 element yagi by AP1T, an F9FT 21 element yagi by W1JR, an experimental 23 element Cushcraft "Boomer" yagi by K1WHS and the new Tama SST-0719 Yagi recently introduced by WB6NMT of Lunar Electronics. The latter is a copy of the K2RIW 19 element yagi which is no longer available from RIW products.

Maximum 23 cm antenna gain was won by a quad of F9FT 23 element yagis by W1JR with 22.7 dBi gain followed by a vertical stack of 4-28 element loop yagis at 22.1 dBi by Spectrum International. Highest gain for a single antenna went to W3HQT who entered a 45 element loop yagi (Editors Note: Developed by W3CXU) which measured 19.5 dBi followed closely by KA1GT at 19.4 dBi from a 36 element loop yagi. 13 cm was led with a 32" dish by W1JR which measured 22.6 dBi and followed with a 25" "Snow Sled" dish at 21.6 dBi by N. Metivier.

Next years conference is scheduled for the same weekend. Location is not firmed up at this time.

* * *

TID BITS CONTINUED

Sun watcher, W2AXU, John Power reports: May 1981 mean monthly SS No. 126.0 (R1). Smoothed No. for November 1980- 147.7 (RZ)

W2AXU received a notice from the FCC that the extention time for comments on the Amateur Rules Plain language Docket 80729 was moved up to August 21, 1981 with reply comments October 21, 1981. It is important that Amateurs make their feelings known about this so called "plain language" putdown of Amateurs by the FCC. Here is your chance - get in touch with W2AXU for details.

* * *

SPACE FILLERS

The tip you leave today would have bought the meal a few years ago....
Bumper Sticker of the Week: "The Rat Race is Over..The Rats Have Won "....
The good ole days were when the stoves were pot-bellied and you weren't...
Wouldn't it be nice if the government guaranteed satisfaction or our money back??
No one should boast of his integrity until he has had a good chance to be dishonest...
A dirty book is seldom dusty...
The more things you own, the more you are owned by things...
All the kookies are not in the jar....
If your parents didn't have children, odds are you won't either..
Money no longer talks - it just goes without saying...
Don't force it - get a larger hammer...
Never do card tricks for the group you play poker with....

JUNE VHF QSO PARTY - HILLTOWN

The 1981 Pack Rat June VHF QSO Party effort at Hilltown, Pa. is over at last. The main difference between this year and last was that this year there were a lot more people breathing a sigh of relief. We had more than twice as many participants and there were even a few smiling faces during break-down on Sunday night, (even in the rain!). Things got off to a good start on Friday and we had shelter and power for all stations by mid afternoon. Most of the antennas were up and stations were on the air Friday night, (including 1296). As we wandered over to the Hilltown Tavern on Saturday we all wondered "Shouldn't we be doing something else?" The answer was no - we were ready and had time to spare. The contest had its' share of equipment malfunctions, but all were repaired in short order. It was clear from the start that we were doing well and all the new gear and antennas performed better than expected.

Highlights of the weekend were a 2304 contact with W2SZ in Western Mass; 30 contacts on 1296 with a new solid state rig and 180 element "loop" array; a fantastic telephone system; new club antennas on 220, 432, 1296 which all performed excellently; New 2304 base station and mobile EXpedition rigs; and finally, an increase over last year in both sections and contacts on all bands!

Thanks must go to the band captains and their assistants for great operating efforts and great stations this year, but even more I would like to thank all the club members who helped out setting up, tearing down, delivering towers, providing refreshments, logging, and who just plain showed their interest and support. We haven't had this much enthusiasm in June for many years; lets hope this is the start of a new trend.

73, Bill, W3HQT

* * *

FROM ARRL DIRECTOR'S LETTER DATED JUNE 22, 1981
NO. 1773

ARRL DIRECTORS: As reported in DL#1771, for the past several weeks we have been in the process of planning for the introduction of a technical experimenter's newsletter. The planning phase is essentially complete. The best news is that Paul L. Rinaldo, W4RI, has agreed to be the editor. By happy coincidence, Paul is featured in "QST Profiles" in July. He will work on the project from his home in McLean, Virginia.

The name of the newsletter will be QEX: The ARRL Experimenter's Exchange. It's objective is: (1) To act as a catalyst for technical development in the amateur and amateur-satellite services, by providing a medium for the exchange of ideas and information between amateur radio experimenters who may be geographically isolated from one another; (2) To document advanced technical work in the amateur radio field that is not of sufficiently broad interest to permit detailed documentation in pages of QST; (3) To demonstrate the League's commitment to, and support for, efforts to advance the state of the amateur radio art.

Initially, QEX will appear in alternate months. If sufficient material is forthcoming, the schedule will be made monthly.

While we expect QEX to have a professional appearance, rapid dissemination of information will take precedence over aesthetics in its production.

It is not expected or intended that every League member will be able to read and understand QEX. Most articles will assume that the reader has at least some familiarity with the subject, or that he is willing to refer to a standard text for background. QST will remain the more appropriate medium for tutorial and introductory articles for the general-interest audience. No change in the QST editorial policies for technical articles is planned.

Initially, at least, QEX will contain no advertising. Subscription rate for ARRL members will be \$6.00 for 12 issues; for non-members, \$12.00 for 12 issues. We are not ready to accept subscription orders at this point; an appropriate announcement will be carried in QST and elsewhere later in the year. These subscription rates are based on delivery in the U.S. Later we'll provide info on what additional postage may be required for delivery outside the U.S. We hope to solicit editorial contributions to QEX in a brief article in Aug. QST. Editor Rinaldo expects to have the first issue off the press in mid-Nov. This is somewhat later than originally planned, but the trade-off is that this will permit the first issues to have much higher-quality content than would otherwise be possible.



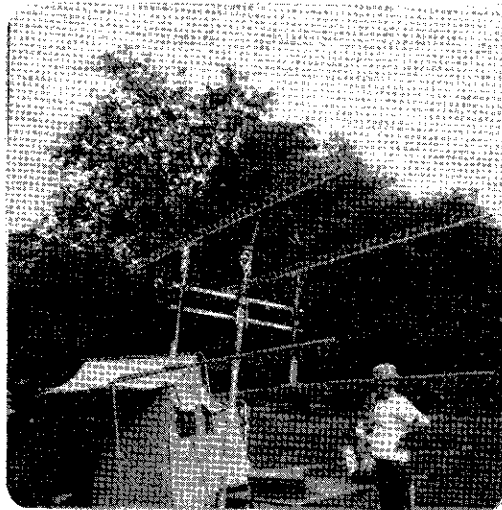
THE STRATEGISTS
W3ZD - WB3IND - K3MXM



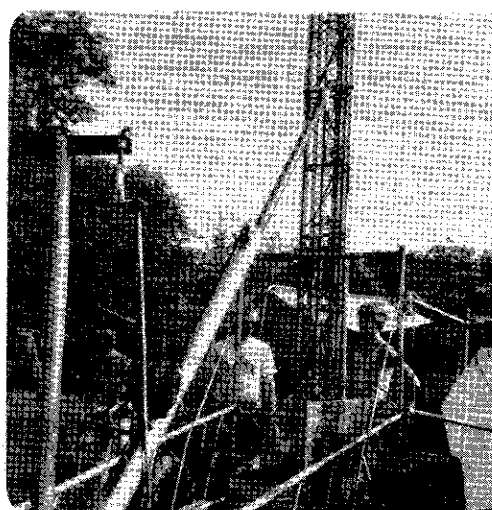
WA3JUF ENCIRCLED BY THE 1296 MHZ
LOOP YAGIS



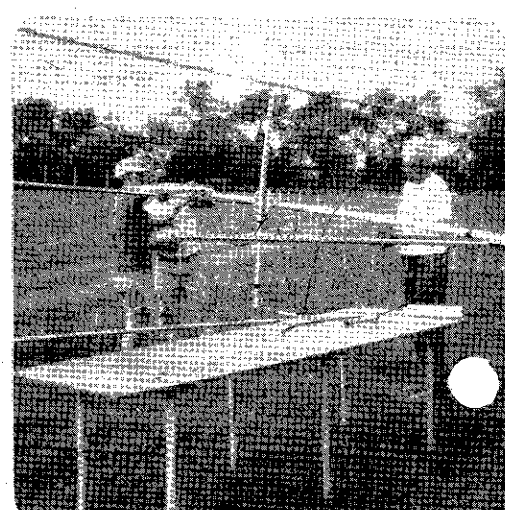
HARMONIC de WA2DPU- WA3AXV -WAIYHO/6
WB2VLA, and an ARM



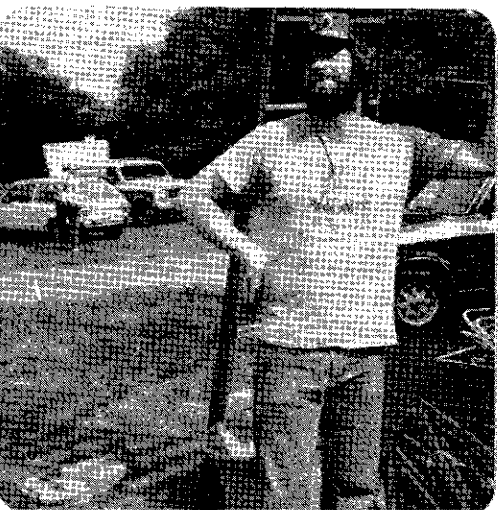
K3NHX - WLL THEY WORK?



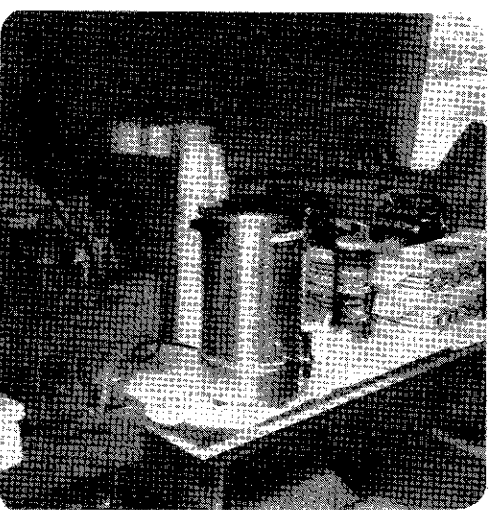
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