

# PACK RATS'



## PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

# CHEESE BITS



MT. AIRY VHF RADIO CLUB, INC., PHILADELPHIA, PA. ARNS  
50.125, 144.150, 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

SCANNED TO PDF BY BERT, K3IUJ, 2012

VOLUME XXI

DECEMBER, 1979

NUMBER 12

### THE PREZ SEZ

If conditions on 6 meters keep up the way they have been the next two months, we're going to have a very interesting affair on January 12 and 13, 1980. The whole complexion of the VHF contest could change.

For those who don't know what has been going on (could anyone not know); the 6 meter band has been open for F2 propagation every day for the past weeks and only promises to get better. Stations with very modest equipment have been working coast to coast and even into Europe, Alaska, South America, and the Pacific. By modest equipment, I mean 10 watts and a 3 element beam. The band has been packed each day while people are at work. Imagine what it will be like during a contest week-end!

This is what I am convinced VHF contests are all about - creating a specific time when everyone will be on the air so that all can take maximum advantage of what propagation conditions might exist. (You can't work them if they're not there). Then everyone works more states and countries and has a lot of fun. Contest and non-contest stations benefit. Conditions haven't been this good since 1958, and they probably won't be this good again until 1990! Better get that 6 meter gear going.

Since this is the last chance I'll have to make a plug for the VHF Sweepstakes while there's still time to do something about it, I urge you all to get every piece of gear checked out now. Activity on all bands will be way up this year and even a modest station can make a good score. Make sure what equipment you do have is working well and the antennas rotate reliably and are fed with good quality feedline. Nobody expects everyone to do a hundred thousand points, but they all add up - big scores plus smaller scores. The point I would best like to make is this: the Club effort in January is a combination of many individual efforts. You can help the Club by doing the very best you can; you don't have to leave your own ham shack - just get on the air and put in the time. The more time you put in, the higher the score; the more you help the Club effort.

The Pack-Rats have helped you along the way - the time to pay back a little bit of the debt and have fun at the same time. That's my latest motto, "CONTESTS ARE FUN". If you go into it with that in mind it will be fun and you'll benefit the Club at the same time. Come on all you "elitists" .... lets go! Hope to see you all on December 20th at the meeting.

73 es DX,

Bill, W3HQT

Pack Rats CHEESE BITS is a publication of THE MT. AIRY VHF RADIO CLUB, INC. Philadelphia, Pa. and is published monthly.

Subscription Rate - \$2.00 per year.

We operate on an exchange basis with other publications. Anything that is printed in CHEESE BITS may be reprinted, unless otherwise stated, provided that proper credit is given

SWAP SHOP ITEMS - no charge.

DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING.

EDITOR:

W3CL, Harry B. Stein  
2087 Parkdale Avenue  
Glenside, Pa. 19038  
215 - 887-5052

PUBLISHER/SUBSCRIPTION MANAGER:

K3GAS, Doc Cutler  
7815 New Second Street  
Elkins Park, Pa. 19117  
215 - ME 5-1078

PRINTER:

WA3FOF, Ralph Alexander  
2600 Cheltenham Avenue  
Philadelphia, Pa. 19150  
215-276-4185

TYPIST:

WA3TEM, Marsha Lissauer

TRUSTEE OF CLUB CALLS: W3CCX-WR3ACD:

WA3AXV, Ronald Whitsel  
209 Frog Hollow Road  
Churchville, Pa. 18966  
215-355-5730

AWARDS CHAIRMAN:

W2EIF, Joseph Kilgore  
#5 Sunnybrook Court  
Stratford, N.J. 08084  
609-783-9478

CLUB HISTORIAN:

W3CL, Harry B. Stein

OFFICERS: 1979-1980

PRESIDENT: W3HQT, Bill Olson  
VICE-PRES: W3IIT, Harry Brown  
COR. SECY: WB3HHO, Paul Randolph  
REC. SECY: K3IGX, Dick Boyle  
TREASURER: K3GAS, Doc Cutler

DIRECTORS:

W3HMU, Tony Souza (Ex-Officio)  
N3AHI, Jim Holt (2 years)  
WA3NFV, Dan Mitten (2 years)  
WA3JUF, Dave Mascaro (1 year)  
WA3WAS, Steve Simon (1 year)

\* \* \*

MONDAY NIGHT NETS:

7:30 PM - 144.2 Mhz AM/FM/SSB  
8:30 PM - 50.2 Mhz AM/SSB  
9:00 PM - 222.98/224.58 Mhz FM  
9:15 PM - 1296.3 Mhz CW  
9:30 PM - 432.1 Mhz CW/SSB

NET CONTROL

W2EIF  
W3CL  
K3GAS  
W2EIF  
K3IUW

PACK RAT REPEATER - WR3ACD - 222.98/224.58  
Churchville, Pa.

1-302-478-2757

AMATEUR  
and  
ADVANCED  
COMMUNICATIONS



G. B. WALLS

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



PENNSYLVANIA  
INSTITUTE OF TECHNOLOGY

PAUL D. MERCADO - W3FBF  
FCC AMATEUR Instructor COMMERCIAL  
LICENSE INSTRUCTION

(215) PL 2-7100  
(215) JA 8-6998

414 SANSOM STREET  
UPPER DARBY, PA. 19082

MAKE A GOOD MARRIAGE GREAT!



ASK US ABOUT OUR WEEKEND.

TONY AND JAN DOUG AND WENDY  
W3HMU WB3KES  
HARRY AND ROSE DAN AND LUCY  
W3IIT WA3NFV

CALENDAR OF COMING EVENTS  
Syllabus by Lee, K3MXM

NOVEMBER

- 3 WARA Banquet - Warrington Motor Lodge
- 3-4 ARRL-Sweepstakes - CW - see October QST - Page 96
- 6 Election Day - "Throw the bums out" - be sure and vote your preferences.....
- 8 Board of Directors Meeting - QTH - W3CJU - Don Hampton  
500 East Court Street  
Doylestown, Pa.  
If lost - 348-8969  
Directors and interested parties always invited.
- 11 4x4 net group meeting at 1 PM. Klein Branch, JYC (NE PHILA.)
- 11 Veteran's Day - Thats right, it used to be called Armistice Day until 1954
- 11 RF Hill - Winter Hamfest - National Guard Armory, Sellersville, Pa.
- 14 Eat Popcorn
- 14 Delaware Valley Chapter, QCWA - Dinner Meeting 7 P.M. Buck Hotel
- 15 General Club Meeting - Southampton Free Library, Street Road, Southampton, Pa. 8 PM  
Two Meter Transverter Nite: Randy, WB2SZK will discuss transverter theory - help with your kits - building instructions, tune up info. The Mario Raffle, Frankies Silent Auction, Refreshments. An open meeting to one and all. Bring your buddies.
- 15 Pike discovers his Peak 1806
- 17-18 ARRL Sweepstakes, Phone - See October QST, Page 96
- 17 Suez Canal Opens 1896
- 19 Apollo 12 lands on the Moon 1969
- 22 Thanksgiving Day, Easy on the seconds and thirds
- 22 President John Kennedy Assassinated 1963
- 24-25 CQ World Wide Sweepstakes - CW
- 25 Cara-Fest 79 - Elliott City Armory, Maryland
- 25 DAFG Short Contest - VHF

General Club Meeting for the Next Three Months  
December - Contest Preparations  
January - Crying Towel  
February - Home Brew Nite

Voted to Membership  
W3TSE, William Letvenko,  
XYL, Mary. 59 Pine Valley  
Road, Doylestown, Pa. 18901  
215-348-8933

(THE PREZ SEZ CONTINUED)

\* \* \*

If a contest station had the choice between building a 2 meter or 220 FM kilowatt or building up a 2304 station - which do YOU think would be in the best interest of VHFing?? More next month.

Thanks to Jack, W2AXU for his interesting and informative talk on our friend the SUN at the Oct. meeting. The Nov. meeting will be an introduction to solid state VHF transverters and should be a must for all club members. Put it on your calendar and by the way, speaking of calendars, its almost Nov. - Still some good weather for antenna work-need help? Just ask! See you Nov. 15th.

73, Bill, W3HQJ

NEW PRODUCTS OF INTEREST TO HAMS

By Lyn, W3NSI

1. COMMUNICATIONS RECEIVER: Kenwood is coming out with a general coverage receiver in December of 1979. The R-1000 is reported to be about the size of the 120 SSB T/R and will be a general coverage unit, 220 Khz to 30 Mhz in 1 Mhz bands. Digital readout is employed. It is hoped that a sample unit can be evaluated in the near future. Price \$495.
2. RECEIVING PRE-AMPS: Advanced Receiver Research, which was mentioned here last year in regard to VHF/UHF converters, also makes a line of pre-amps. I have had a chance to inspect one of the converter units, and, they are very well done. The pre-amps are rated at 1.1 to 1.8 DB noise figures from 28 Mhz to 450 Mhz. The units are constructed in cast aluminum boxes and feature BNC fittings for input and output. Price \$25 (\$28-432 Mhz) Box 1242, Burlington, Ct. 06013
3. COUNTER KIT: DSI Instruments has a new counter kit, the #5600A, which is a step or two up from the 3550, which is still being sold (\$100). The new 5600A has a proportional oven time base, and uses 9 digits compared to 8 on the 3550. Coax inputs are also mounted on the front panel, a much better arrangement. Frequency coverage is 50 Hz to 600 Mhz. Freq. stability rating is .2 PPM from 10-40 C. Unit operates from 8.2 - 14.5 VDC. Price \$150 7924 Ronson Road, San Diego, California 92111

\* \* \*

VHF/UHF REPORT

By Jo, W2EIF

The bands above 50 Mhz have had the usual activity for this time of year. The usual Summer conditions and tropo are over for the year and the normal low activity has taken over. The 6 meter band is where the action is!

The 50 Mhz band has been open almost daily for dx activity. The action usually starts in the AM and may last till noon for crossband activity 28885 + 10, to 50 Mhz. Stations have been worked from this area to the British Isles, France, Spain, Sweden, Norway, Switzerland and reportedly to Yugoslavia and Czechoslovakia (Note: Iceland was in on Nov. 18th)

Stations in Europe are heard calling "CQ Crossband", and they usually state the exact frequency on 50 Mhz where they are listening. Around noontime the band shifts west and it is possible to work the West Coast with signals moving North and into Alaska as the opening progresses. The KH6 stations may also appear.

The activity was very good on Nov. 6 when VE1,2,3 and the 4,5,8 and 0 areas could be heard strongly on back scatter. The band opened to Alaska from 2 to 5 PM EST and as many as 12 Alaskan stations were heard and of course many worked from this area. (As usual I was somewhere else) However, the next day, Nov. 7 was a repeat, but not quite as good. 5 or 6 Alaskans were in - this time I got 2 of them for state Nr. 49. The big event of the afternoon was that WA3AXV, K3MWV and WA2DPU worked Japan, and VE1ASJ worked KX6. The KH6 stations were in briefly, but I did not hear them. Nov. 8 was the next big day with a number of KH6 stations on. (I got one for Nr. 50). They were hard to work because the KH6's were being called by practically all areas East of the Mississippi. The band was open until 5 PM local time.

E12W, Dublin and ZB2BL Gibraltar are both on 6 meters and have been worked by many from East to Middle West. No openings were noted for Nov. 9. Nov. 10 produced a short opening to W7 and VE7 and W3HFY worked ZB2BL in AM. On Nov. 11, there was some crossband with no West DX. Nov. 12 crossband was better but no West DX. W1 and VE1 and NNJ could be heard working KH6 but with marginal reports. Nov. 13 - some crossband in the AM, but no DX to West. Nov. 14, E12W was strong locally and worked by W3KKN, W3HFY and others. Nov. 15 produced the best crossband in the AM to the local area, and E12W was easily worked direct with strong signals (he gave me 5-5 to 5-9). The band was good to past noon which is later than normal. In the afternoon about 1:45 EST AL7C appeared with 5-9 signals. Fortunately, he wanted NJ so he came back to me. He was in for possibly a half hour mostly working states that he needed for WAS. (This is very frustrating for those in the undesired state that needs Alaska).  
(CONTINUED ON PAGE 7 )

## 50 MHZ 100 WATT OUTPUT LINEAR AMP

by Randy Bynum, WB2SZK \*

In my desire to improve my station and eliminate those unnecessary tubes and associated screen and filament supplies, I have designed and built a one stage 100 watt output 6 meter amplifier. It provides about 10db gain when used with a 28 VDC supply capable of about 6 amperes. A drive of approximately 10 watts is required to produce the 100 watts output. This drive level is achieved with the modern solid state all mode transceivers presently available on the market.

In my case this unit is an intermediate amplifier ( running at reduced power) which will be used to drive a 3-500Z grounded grid amplifier. However, 100 watts output on 50 MHZ will provide a very respectable signal and is an ideal compromise power level.

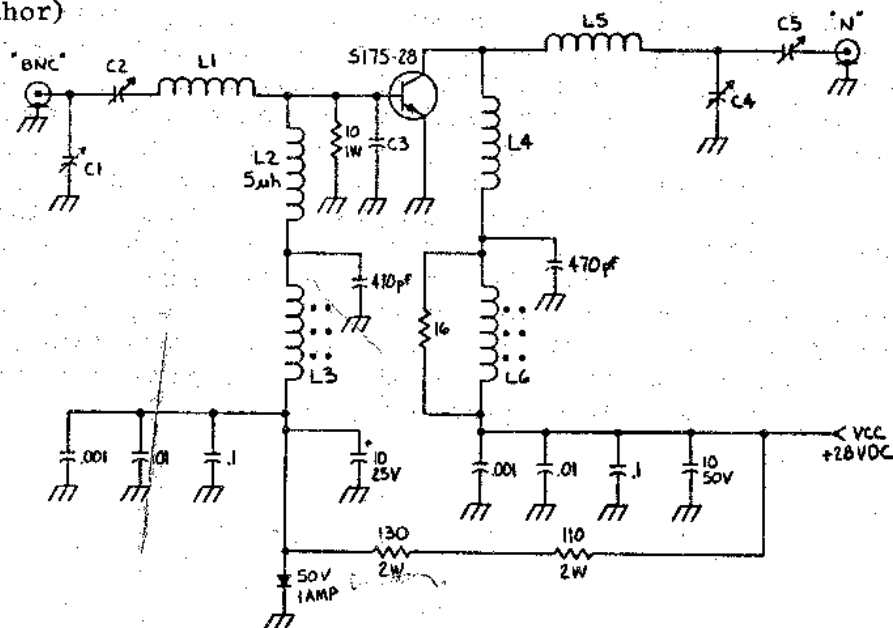
The linear is simple to build using standard VHF practices and high quality components capable of withstanding the high RF circulating currents encountered. Two levels of isolation are used in both the base and collector leads to eliminate any tendency toward self oscillation. The amplifier is perfectly stable even into an open circuit or short circuit. The S175-28 is a flange-mounted device with four leads each about 1/4" wide. A fairly substantial heatsink is required in order to properly cool the device. The heatsink I used is 4 x 6 inches with 6 vertical fins about 1-1/4" high. After about one hour of conversation on 6 meters with WA3AXV under VOX conditions, the heatsink was only slightly above room temperature. If the bare aluminum had been painted black there would have been further reduction of the temperature because of additional convection cooling.

Tune-up is very simple and may be done as follows:

- (a) Apply about 13 VDC through a meter capable of measuring at least 250ma. With no drive applied the idling current should be about 25-50ma.
- (b) Apply drive through a power meter and adjust for minimum reflected power into the base of Q1. (The output should be terminated into a 50 ohm load).
- (c) Now move the power meter to the output side and connect the 50 ohm load to the output of the wattmeter.
- (d) Again apply drive and tune the output circuits for maximum output indication on the wattmeter. These adjustments interact and some care must be used in going from one trimmer to the other until the proper setting is achieved. At this point about 40 watts should be available with 10 watts drive.
- (e) Apply 28 VDC and retune the output stage for maximum output and the input stage for best match to the exciter. Output now should be about 100 watts of linear power and ready to connect to the antenna.

A possible substitute for the S175-28 appears to be an SD1407 which is made by SSM, although it is in a slightly smaller package. The S175-28 is made by CTC of Varian.

No TVI or BCI has been experienced from my QTH running this amplifier into an 8 element Yagi; although none was anticipated since I have none that I know of with 600 watts output from my original pair of 4CX-250Bs'....\*(do not reprint without written consent from the author)



### COIL TABLE

- L1- 2 TURNS #16 5/16 ID
- L2- 5uH MOLDED RFC
- L3- 10 TURNS #24 ON T50-2
- L4- 8 TURNS #16 1/4 ID
- L5- 2 TURNS #12 5/16 ID
- L6- 10 TURNS #18 ON T50-2

### CAPACITOR TABLE

- C1- ARCO 46B
- C2- ARCO 46B
- C3- UNELCO 1000pF
- C4- ARCO 465
- C5- ARCO 465

## AMTRAK MOBILE ON TWO METERS

By Anne - K3NHW

We (K3NHX, Joseph and K3NHW, Anne) had the reservations for a vacation trip on the train - from Philadelphia to Seattle and back. In between, we planned to visit our daughter and her family, who live in a little coastal town on the Pacific Ocean, 150 miles south of Seattle. Once the dates were set (and these days, trains are crowded, so you take what they offer) we began to plan for a good time -- lots of paperbacks, comfortable clothes, and two meters!

Of course, we had the HT, but we wanted more than the six crystal positions and one watt power, so we decided we would take the ICOM 211, and the mobile mag-mount 5/8 whip, which would give us fairly good coverage. Remembering to pack a three-way plug converter, utility extension cord, some test equipment, basic tools and the repeater book, we packed it carefully in a tough canvas bag, swaddled in rain coat zipout linings, and carried it personally all the time! The magnetic mount we unscrewed from the whip, and put in the middle of a packed suitcase, so it wouldn't suddenly attach itself to some passing hunk of steel, and away we went!

We thoroughly enjoyed the trip out West - overnight to Chicago, then two more nights and one whole day on the Empire Builder from Chicago to Seattle. But we didn't get a chance to get on two meters, because the electric outlets in our bedroom had no power, and neither did any other outlets in the car we were in. But unwinding, reading, and scenery were wonderful, and we arrived Saturday morning all rested up to visit our Washington state family.

Having a ham radio is a wonderful way to break the ice in a new territory, and even with relatives, it provides a center of interest for the kids, a novelty to the grownups and their friends, and gets you out of their hair if togetherness threatens. No one ever had to wonder what to do to amuse a ham, as long as he had his radio, and/or some problem with it. We had both.

After some local contacts, which led to several visits to see antennas and shacks, and a visit with a K7 who is planning to break the world's record for CW, and already has ARRL certification for 65 wpm, our little ICOM fizzled out.

Desolation set in, but not for long! Remembering that ICOM-West is in Bellevue, Washington, right next to Seattle, and after a phone call, wherein they cheerfully agreed to look at it right away, and would try to fix it "while we waited", it was up to Seattle and Bellevue and over to ICOM-West. (It was by now the day to leave, and we had to go up anyhow.) Anyhow, ICOM was extremely agreeable and efficient, and they fixed the rig and gave it a complete checkup in the space of an hour. We were once again ready to board the train, sorry to leave, but glad to be coming home, too.

This time, the power outlets worked, and the entire trip was one long two meter ragchew. Well, to tell the truth, there were some isolated spots in Montana, North Dakota and Wisconsin where things were pretty quiet, but the repeaters and the hams were working and friendly across the whole United States. Probably our calling "K3NHW Mobile/Amtrak" was unique enough to spur some people into answering our call. Each group told us of the next repeaters we would encounter, and we had a lot of really enjoyable conversations.

In Chicago, spending the night in a hotel, we had a great roundtable, including a mobile Pennsylvanian on a tourist bus with an HT -- us in the hotel room with the whip, and others in more usual mobiles and ham shacks. It was a roaring success, and the ideal way to travel. You never feel like a stranger when you have two meters along.

Returning from Chicago to Philadelphia, our old, old railroad car didn't afford a good enough ground, so we couldn't get the SWR down sufficiently low to transmit safely, so we listened to interesting roundtables and conversations all day right across Ohio and Pennsylvania, arriving home in time to check in on the Pack Rats Monday night net.

A great trip, in many different ways, and the first time we ever traveled Amtrak/mobile. We heartily recommend it for a pleasant vacation.

SWAP SHOP

FOR SALE: G.E. Master Pro- low band, High  
split 100 W. with P.L. and ACC. Heathkit  
B300/SB400. Receiver w/all filters; xmitter  
w/xtal deck. Complete pkg. w/ mic.& manuals.  
CONTACT: Bruce Loss, WA3YUE  
Work Phone: 215-657-4230, Ext. 48 or 30

FOR SALE: Large list of very excellent items  
from W3URE sale.  
CONTACT: Jack Jones, W3NTD  
Phone: 215-947-1918

FOR SALE: (Contest Special) Pair of 8/8  
antenna specialists (HM-174) 432 Mhz J-  
slots - measured 13 db gain each-\$20/pair.  
6 mtr. 4 el. Yagi ( Handbook design) \$10.  
220 Mhz low end AM/CW transmitter 10W. output  
w/ant. relay, \$10. Tubes as follows: 6939,  
6360, 7984 (TX62) New or tested new \$3.00 ea.  
CONTACT: Ron Whitsel, WA3AXV  
Phone: After 6PM, 215-355-5730

FOR SALE: Swan 250C - 6 mtrs., AM/SSB/CW with  
pwr. supply & manual \$350.  
CONTACT: Jerry, K3KVS  
Phone: 215-635-4135

FOR SALE: HW-16 with HB VFO \$90.  
CONTACT: Ric, K3QQ  
Phone: 215-355-1980

FOR SALE: Heath Monitor Scope  
Model SB-610. Excellent  
Condx. w/manual. \$90.  
CONTACT: Jim, W3SMK  
Phone: 215-886-5489

FOR SALE: 2 mtr. multi-mode Yaesu FT-225RD  
Excellent condition. Only 5 mo. old - fair  
price.  
CONTACT: Tony Spina, WA2LNC  
19 Norman Lane, Succa Sunna, N.J.  
Phone: 201-584-6839 07876

FOR SALE: Narda Microwave 8 to 12 Ghz -  
G2As FET amplifier. Small signal gain: 25 db.  
Noise figure: 7.5db. Power output: +10 dbm.  
15V. DC. Excellent lab amplifier.  
CONTACT: Harold Winard, KB2M  
30 W. Union Tpk. B-8  
Wharton, NJ. 07885  
Phone: 201-361-6478

WANTED: 432 Mhz equipment, xmtr. converter,  
or transverter.  
CONTACT: Earl, N3EG  
Phone: 215-677-1699

WANTED: PET 8K with cassette. Will trade  
towards Techtronix 545B mint condx. w/new CRT.  
"K" plug-in or Decwriter II terminal - brand  
new -- 30 hrs. old  
CONTACT: Marc, WA3CRM  
Phone: 215-235-8630

Thurs. & Fri. 6:30 - 10 PM/Sat. 10AM - 6 PM  
F&C SALES CO., Surplus Electronics  
Test equipment, Scopes, Volt Meters,  
Power Supplies, All types of Electronic  
Components, Transistors, Diodes, Tubes,  
Wire, and many other specials  
906 W. Kings Hwy., Haddon Heights, NJ 08035  
609-546-7773

\* \* \*

VHF/UHF REPORT CONTINUED  
FROM PAGE 4

The other West Coast stations were heard very weakly and not for very long, prior to the Alaska station coming on. One other Alaska station was on, but could not be identified here. W2AXU at the last meeting indicated that the current sun spot cycle will peak this month. However, the cycle drops off much slower than it rises. If so, then we might expect this DX condition to last for some months to come. The Pack Rats now have quite a few WAS operators. So far they are K3MWV, WA2DPU, W2EIF. I am sure there are more; maybe they will get mad at me for leaving them out!! This condition only occurs once every 11 years, so don't pass it up for something you can do anytime!!!

\* \* \*

TID BITS

Congratulations to Dr. George S. VanDyke, W3HK who received his PHD from Stanford after these many years. He joins the ranks of other Pack-Rats with the title of Doctor either in the technical or medical field. They are as follows: K4AWS, W3CLT, K2EVW, K3GAS, K3NHX & K3QQ. Did we leave anyone out? Here is one for the book. K3LOM DXing on 6 mtrs. was in contact with E12W - to make sure of a QSL card; Harry, who works for Leeds and Northrup, foned Leeds plant manager in Dublin, Ireland and asked him to contact E12W by phone requesting the QSL card. As a result of the conversation, E12W requested a job at the Dublin Leeds Plant and was hired forthwith. Did you get your QSL card, Harry?

(CONTINUED ON PAGE 8)

TID BITS CONTINUED

K3QQ says "remember during the VHF SS that - twice five two is ten-four".

Hy, WA3NDE recently returned from Israel where his grandson was bar-mitzved at the "Wall". Hy contributed the refreshments at our last meeting in his grandson's honor.

Simplex operation on Monday Night nets at 8:30 PM on 223.5 Mhz as follows:

Dec. 3, 17, 31 and January 7, 1980.

CQ, W3CL DE JY9RB: Hi to all. I am back here in Jordan again with some of our newest UHF Radios. I met JY9BB and his XYL JY9MB the other night. BB is the chief radio engineer to the King, JY1, I arrived here on the 21st. of October and will return via Germany on the 12th of Nov. I will visit DL3ER in Munchen and then Koln for 4 or 5 days of business. Please say hello to all the Pack-Rats for me. 88's & 73 to all. Dick Bokern.

\* \* \*

WORLD WIDE VU CONTEST

The Bangalore Amateur Radio Club (India) announces The Garden City Contest on 8-9 December 1979.

Contest is open to all licensed amateurs in the World with the contest period between 1200 GMT on Saturday the 8th and 1159 GMT on Sunday the 9th. Be on the look-out for VU stations that weekend.

\* \* \*

FROM HR REPORT NO. 277 - NOV. 16, 1979

WIDEBAND FM ON ALL OF 6 meters, now has been formally proposed by the FCC in a Notice of Proposed Rule Making, as predicted in HR Report 275. Comments on PR Docket 79-285 must be in the FCC's hands by December 10, and Reply Comments will be due by December 26.

\* \* \*

THE PACK RAT

A DESERT RODENT IN NEED OF WATER

Submitted by W3ZD

The native American 'rat' is the wood rat, which in the arid West is better known as the pack rat or trade rat.

The animals have a mania for collecting and seem particularly attracted by metal objects. Perhaps it is because they are readily missed that coins, belt buckles, keys, and other essential small things seem to be preferred when the pack rat rustles around in a camp at night, frequently leaving a pebble or other valueless object in place of what it takes away. The habit of making an exchange when amassing property earned the animal the name of trade rat or pack rat among the old prospectors in the West. Of course, there are fabulous legends about trade rats carrying off a cake of soap or some other insignificant item, leaving a solid nugget of gold in payment!

The large pile of debris collected by the pack rat shelters and protects its nest underneath. (Mt. Airy Pack-Rats cellars and garages!!)

\* \* \*

LAST MINUTE TID BITS

Congratulations to Dave, WA3JUF, the first to put together the club project transverter. He used it to report in on the 2 meter net on Monday night the 19th November with a good sig.

With all the hot DX on 6 meters, we can report that N3AHI and W2AXU worked a KG6 and a KX6 way out there in the South Pacific. The J stations worked by WA3AXV, WA2DPU, and K3MWV were in W2EIF VHF report. W3HQT on fast turn snagged KX6PF as a tailender on November 20th.

W2AXU reports the smooth Sunspot number for March 1979 was 136.1

Many thanks to Dick, W3FQD and Bruce, WA3YUE for their assistance in the preparation of the up-dated Pack-Rat membership directory. It will be distributed at the December meeting.



## TWENTY YEARS OF AMATEUR RADIO

C. B. DESOTO

OCTOBER 1934

Conclusion

Legislation has always been the arch enemy of the amateur. It is now an old and oft-told story that but for human erring on the part of the first radio law makers of 1912, who consigned the amateur to the "useless" low-wave 200 meter region, the first encounter with this formidable antagonist would very likely have ended in virtual extinction.

With the coming of the A.R.R.L. upon the scene, amateur radio had a champion to fight its cause. In ten years a dozen serious legislative threats were successfully combatted, as the growth of other radio interests engendered jealousy of amateur territory. Yet instead of losing territory, amateur radio gained new and valuable bands. The last of the National Radio Conferences, Nov. 4, 1925, removed the final threat of broadcasting against amateur radio. A menace of another kind put in its appearance during 1926 and 1927 -- attempts on the part of municipalities to regulate the local amateur operation. For six months the League battled in the Courts of two states, and in 1927 obtained court opinions denying municipalities the right to interfere with amateur operation. A new radio law was passed in 1927; its provisions proved the American amateur was a recognized institution, here to stay.

But internationally the situation was different. During the autumn of 1927, delegates of most of the nations of the world met in Washington to draw up a new international radio treaty. The most powerful nations on earth endeavored to have amateur stations forever abolished. Only sustained effort on the part of League representatives, backed by the splendid support of the U.S. government delegation, made it possible to emerge from that conference with the rights amateur radio possesses today. New regulations, in conformity with the international treaty, went into effect on January 1, 1929.

From 1929 until the present day the star of amateur radio has been fixed. There have been threats against existence, both domestic and international, but watchful intervention on the part of A.R.R.L. officials have prevented these threats from reflecting upon the day-to-day operation of the amateur. Two major revisions of the amateur regulations have been made, both embodying the result of recommendations by the A.R.R.L.'s board, and both hailed by the rank and file of amateur radio as resulting in improved operating conditions.

It is not possible to detail the number of times in which A.R.R.L. officials have operated to protect amateur interests since 1929. Four international conferences, half a dozen domestic radio bills introduced in Congress, with hearings and memoranda and investigation, hundreds of conferences with members of the Federal Radio Commission and its staff -- the importance of all these is so great that the secretary of the League commonly visits Washington at least every other week, spends half his time in connection with regulatory matters, in addition to the watchfulness and activity maintained by the vice-president and general counsel.



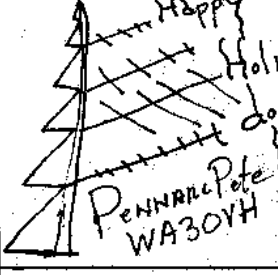
Meanwhile, amateur radio, its orbit stabilized, has proceeded to perfect itself. It is impossible to outline even the broad trends along which it has progressed in the allowable paragraph or two which can be allotted for modern times in this resume. Elsewhere in this issue is a record of technical progress, into which there is no need to trespass. One is bowed down with a sense of futility at the enormity of the task, in attempting to visualize the scene. Every objective of twenty years ago has been realized. True, in their stead new objectives have risen, which must be realized in the coming twenty years.

The highlights of 1934 contrast strangely with the highlights of 1914.

One can sketch, with a few broad strokes.

1934: Forty-five thousand licensed stations -- thirty-five thousand operators...thirty percent of them active at any one time...their activity spread over six bands with ranges from a few miles to world-wide...nothing remaining impossible of accomplishment within terrestrial limits...international DX a routine occurrence...the congestion of incredible numbers foiled through unbelievable technical progress...point selectivity realized in receiving practice: a literal single signal...stable ultimate transmission on any of the six bands with a new minimum of apparatus and adjustment...operating technique refined and developed through the experience of twenty years of organized relaying...a swell bunch of old timers...an eager group of beginners...a large mass of genuine hams...a watchful and wise organization...Utopia?...Well, hardly...human nature, not circumstances, make Utopia a never-to-be-realized state...yet amateur radio is as near to riding the top of the world as anything can be on this earth.

A toast and a prayer for its continued rise. Here's to Amateur Radio, through the years to come!

<p>HAPPY NEW YR ES 73 MRY XMAS 73 FM JANE WB3DSK 73 DAVE W320 MARK, NAUCIE, SCOTT, JILL</p>	<p>HOLIDAY GREETINGS DE GAS - DOC &amp; LORETTA</p>	<p>MERRIE XMAS AND HAPPY NEW YEAR JOHNNIE &amp; LORETTA W 3300</p>	 <p>K3KVS HAPPY NEW YEAR</p>	<p>MERRY CHRISTMAS &amp; HAPPY NEW YEAR LYN &amp; SALLY W3MS1 (A WB2 HHJ) LYN SA</p>
<p>HOLIDAY GREETINGS W A3NDE Hy</p>	<p>HAPPY HOLIDAYS &amp; GODDX DE N3AHI Jim</p>	<p>K3 DLS BEST WISHES FOR SEASON CARL</p>	<p>MERRY CHRISTMAS &amp; Happy NEW YEAR K3 NH W ANNE K3 NHY JOE</p>	<p>W A3WAS HAPPY CHANUKAH + NEW YEAR</p>
<p>MERRY XMAS FROM THE PRIM FAMILY W A3IWT</p>	<p>HOLIDAY GREETINGS DE GRACIE - W A3BJQ &amp; GEORGE - W3HK</p>	<p>HAPPY HOLIDAYS K3VYG</p>	<p>SEASONS GREETINGS W3AJS (160)</p>	<p>HAPPY HOLIDAYS DE W A3AAJ + FAMILY</p>
<p>an army X Mics Lynn &amp; Lila The Old Sparks W B3EFO</p>	<p>HOLIDAY GREETINGS K3JZE EL LORRAINE W B3DAH GLEN BRIAN &amp; HOLLI</p>	 <p>MERRY CHRISTMAS &amp; HAPPY NEW YEAR Susie &amp; Jo W2EIF</p>	<p>Seasons Greetings de Sylvia + Harry W3CL</p>	<p>HAPPY HOLIDAYS JOHN K3KTY</p>
<p>SEASONS GREETINGS "MR. CLEAN"</p>	<p>HAPPY HOLIDAYS MARSHA, FRED &amp; JOSHUA </p>	<p>MERRY CHRISTMAS HAPPY NEW YEAR de K3QQ et al.</p>	<p>Merry XMAS Happy New Year K3SHE W A2DPV</p>	<p>HOLIDAY GREETINGS K3HSS Betty &amp; CHAS</p>
<p>HOLIDAY GREETINGS Bill W3HQT</p>	<p>Happy Holi- days Pennac Pete W A30YH</p> 	<p>HAPPY HOLIDAYS W.L. K3PHY</p>	<p>Happy Holidays W3C1L Peg + Carol</p>	<p>Seasons Greetings from Sophie Harrison</p>
<p>Happy Holidays from Helen Brick (MOTHER RAT)</p>	<p>Seasons Greetings from The Space Center CU DEC. 15-16 ON THE SHUTTLE Tony + Mary, KAAWS</p>	<p>SEASONS GREETINGS HARRY W3IIT ROSE DIANE DAVID W3BQF DENISE</p>	<p>SEASONS K3JGX GREETINGS</p> 	<p>MERRY CHRISTMAS AND HAPPY NEW YEAR W A3JAF</p>

215-947-6670

# MARKETLINE™

SYSTEMS, INC.  
2337 Philmont Avenue  
Huntingdon Valley, Pa. 19006  
Computers for Hobbyists



## AMERICAN RADIO RELAY LEAGUE

HARRY A. McCONAGHY, W3SW/W3EPC  
DIRECTOR, ATLANTIC DIVISION

8708 FENWAY DRIVE - POTOMAC  
BETHESDA, MARYLAND, 20034

NE 7-8329

GEORGE S. VAN-DYKE, JR., P.E.  
CONSULTING ENGINEER

W3HK

4607 CONVENT LANE  
PHILA., PA. 19114



AMIL S. GUMULA  
PRESIDENT

A. G. RADIO PARTS CO.  
939 TOWNSHIP LINE RD.  
ELKINS PARK, PENNA. 19117  
TELEPHONE: 215-886-5100

**RCM** Authorized  
Distributor

HOURS  
CLOSED MONDAY  
TUE. & THUR. 9:30-6:00  
WED. & FRI. 11:30-9:00  
SAT. 9:30-5:00

(215) 723-1200  
(215) MI 6-2511

### ELECTRONIC EXCHANGE

ALL TYPES OF HAM GEAR & ELECTRONIC EQUIPMENT  
BOUGHT, SOLD, TRADED & REPAIRED

GORDON R. KITTEL  
W3GK

136 N. MAIN STREET  
BOUDERTON, PA. 18964

AMATEUR & CB RADIO (215) OL 9-5900  
SALES & SERVICE

### "HAM" BUERGER INC. Communication Specialists

BOB HERSHMAN 68 N. YORK RD.  
WA3ZID WILLOW GROVE, PA. 19090

Fine Printing For The Radio Amateur  
Custom Printed QSL Cards Since 1969

### K2RPZ PRINT

**stu goodman**

Birth-Wedding & Bar Mitzvah Invitations  
Raffle Books-Rubber Stamps-Tickets-Bumper Stickers  
Business Cards-Letterheads-Envelopes

15167 744-6260

P.O. BOX 412  
ROCKY POINT, N.Y. 11778

Write for FREE COPY of any of our publications.

**The Ham Radio Publishing Group**  
GREENVILLE, NEW HAMPSHIRE 03048

Exit I-95 at Scotch Rd. South  
Al & Hank (WB2GWF)



### the BARGAIN BROTHERS PHOTO & ELECTRONIC SURPLUS

CONSTANTLY CHANGING INVENTORY LOWEST PRICES

Glen Roc Shopping Center  
216 Scotch Road  
Trenton, N.J. 08618

(609) 883-2050

K3KTY

67-7130

### TRANSPORT EQUIPMENT COMPANY

"EVERYTHING FOR THE TRUCK"

JOHN A. TATE  
President

2215 - 2217 Race Street  
Philadelphia, Pa. 19103

K3MNV

### THE KENRICH CORPORATION ELECTRONICS

RICHARD H. PIERCE  
VICE PRESIDENT

P. O. BOX 652  
LANGHORNE, PA. 19047  
(215) 946-4989

BROWSING - THURS. 7<sup>00</sup> - 9<sup>00</sup>  
SAT. 9<sup>00</sup> - 4<sup>00</sup>

Day-Nite (215) 455-2121

### FERTIK'S ELECTRONICS . . . . .

Components & Equipment

LEON FERTIK

5400 ELLA STREET  
PHILADELPHIA, PA. 19120

CAR STEREO - CITIZENS BAND - BURGLAR ALARMS  
2 WAY RADIO - TOWER INSTALLATION & REMOVAL  
TV - HAM - CB ANTENNAS

*Steve Simons*

MOBILE EQUIPMENT INSTALLATIONS  
SALES & SERVICE

WA3WAS

TEL. (215) RA 8-1138

8808 KENDRICK PL.  
PHILA., PA. 19111

215-276-4185

WA3FOF

RALPH ALEXANDER

Electronic Equipment Repair  
Technical Writing  
Printing

(215) RE 9-8616

### City Communication Center

Amateur - Commercial - Marine

BUY SELL TRADE

Sales - Service - Installations

Joe - WB3GEL  
Tony - K3UKW

2823 Kensington Avenue  
Philadelphia, Pa. 19134

People who look for peace get it.

—Guru Maharaj Ji

For information contact:

DIVINE LIGHT MISSION (DUO)  
6037 Overbrook Ave.  
Phila., Pa. 19131  
Office: 215- GR 7- 2800

1 Year = \$18  
3 Years = \$36

# 73

## magazine for radio amateurs

PETERBOROUGH, NEW HAMPSHIRE 03458

RESIDENTIAL

COMMERCIAL

### SHAVNEY LANDSCAPING

DIVISION - SHAVCO, INC.  
111 S. EASTON ROAD  
GLENSIDE, PA. 19038

PETER H. SHAVNEY, WA3OVH

886-1859

**"HAM" BUEGER, INC.**  
 Electronic Equipment Distributor  
 "Right in the middle of a lot of good company!"

If we're  
 judged by the  
 company we  
 keep, we should  
 do pretty well!

68 N. YORK ROAD  
 WILLOW GROVE, PA 19090  
 215-659-5900  
 Service Since 1956

Wilson Electronics Corp.

Xcelite

SPRAGUE

TELEX

CUSHCROFT

TAB BOOKS

TRW

NBC

VIBROPLEX

TEN-TEC

South River

BRANCOF

"W2AU" HAM-KEY

Larsen Antennas

#high-gain

ASIATIC

ROHN

MILLER

DRAKE

Saxon

CES

ICOM

CDE

nte

GILFER

LMB

TPL

Weller

Waldom

Mansley

communications specialists

MISCO

BIRD

Vector

HUSTER

phelps

Communications Company

BOMAR

AMCO

SWAN

ELECTRONICS

COVER CRAFT

SPECIAL INDUSTRIES

AMP

TELETYPE

XCELITE


WILSON ELECTRONICS CORP.

**Cheese Bits**  
 2087 Parkdale Ave.  
 Glenside, Pa. 19038



**MEETING NOTICE**

MT. AIRY  
 VHF  
 RADIO  
 CLUB,  
 INC.



**PACK RATS**

WAZWAS, STEVE SIMONS  
 8506 KENDRICK PLACE  
 PHILA., PA. 19111

FIRST CLASS