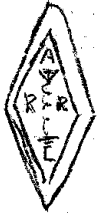


PACK RATS' CHEESE BITS



MT. AIRY V.H.F. RADIO CLUB, INC., PHILA., PA.
(50.2, 145.2, 221.4, 432.3 & 1296.3 Mc.)
CLUB CALL: W3CCX

AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE

MEMBER CLUB: DELAWARE VALLEY COUNCIL OF AMATEUR RADIO CLUBS
MEETING NOTICES: LAST PAGE



VOLUME X

AUGUST 1967

NUMBER 6

A LETTER OF RESIGNATION

To the Pack Rats and Friends:

It is with regret that I tender my resignation as the Editor of Pack Rats' CHEESE BITS. Due to circumstances beyond my control, I find that there is no other alternative.

Since 1958, my pride and joy has been Pack Rats' CHEESE BITS. True, there were many headaches connected with it such as getting the material on time and deciding what should and what should not be printed. It was sad to see the columns disappear; 2 meters, 6 meters, K.U.I., New Ham Equipment, etc. These were replaced with the humorous side of ham radio and I got many a chuckle out of them. It was a great pleasure to watch the paper grow from three pages to its present size (sometimes larger).

I wish to offer sincere best wishes to the new Editor, whoever that will be and urge you all to support him and get your material to him on time. I hope to see the old columns return and perhaps some new ones.

My resigning as Editor does not mean that I will no longer be of service to the Pack Rats.

With regrets and 88,

Mother Rat

July 19, 1967

520 Centennial Road
Warminster, Pennsylvania 18974

Dear Mother Rat:

It is with deep regret that I accept, for the Mt. Airy V.H.F. Radio Club, your resignation as Editor of CHEESE BITS, our club paper.

Since the inception of CHEESE BITS in 1958, you have been instrumental in building the paper to its present size and enviable position among radio club papers. We are sorry that you cannot continue as Editor; however, it is good to know that you will continue your service to the Club in other capacities.

I wish to thank you, on behalf of the Club, and myself, for your past efforts in making CHEESE BITS the successful Club paper it has been.

Sincerely,

David Zimmerman, W3LHF
President

DON'T FORGET THE PICNIC: The Pack Rats will hold their annual picnic and family day on Sunday, August 13 (rain date August 20) at Ft. Washington State Park, Flourtown, Pennsylvania. \$2.00 per family. As in the past we will be joined by the Delaware Valley Chapter of the QCWA. The Philadelphia County ARFSC will also attend in force. Be there if you want to have some fun.

Prizes -- Children's Games -- Free Soda

Pack Rats' CHEESE BITS is a publication of the Mt. Airy V.H.F. Radio Club, Inc., Philadelphia, Penna, and is published monthly.

10¢ per copy \$1.00 per year

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 20TH OF EACH MONTH.

ALL INFORMATION should be sent to:

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8533 Algon Avenue
Philadelphia, Pennsylvania 19152
215 - PI 2-3525

TRUSTEE OF CLUB CALL: W3CCX

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821 W. Lindley Avenue
Philadelphia, Pennsylvania 19141
215 - DA. 4-7524

PRINTER AND SUBSCRIPTION MANAGER:

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Philadelphia, Pennsylvania 19117
215 - ME. 5-1078

AWARDS CHAIRMAN:

W2EIF, Joseph Kilgore
#5 Sunnybrook Court
Stratford, New Jersey 08084

DIRECTORS' MEETINGS are held on the second Wednesday of each month at designated locations.

CODE PRACTICE:

7:00 to 7:30 p.m. Monday through Friday, 50.2 Mc. by W3CL, Harry Stein.

MONDAY NIGHT NETS:

145.2 -- 7:30 p.m.
50.2 -- 8:30 p.m.
221.4 -- 9:30 p.m.
432.3 -- 10:00 p.m.

OFFICERS -- 1967-1968:

President: W3LHF, David Zimmerman
Vice-President: K3HSS, Charles Lustick
Corres. Sec'y.: W3SAO, Francis Brick
Rec. Sec'y.: K3ZFN, Lloyd Schoenig
Treasurer: W3MVF, David Bloch

DIRECTORS: K3JJZ, Elliott Weisman
W3MFY, Preston Funk
W3KKN, Ernest Kenas
K3UJD, Marie Fontana
K3CIV, Ralph Hersh
(Ex-Officio)

PHILADELPHIA COUNTY ARPSG:

E.C.: W3PST, Woody Haldeman
1732 Loney Street
Philadelphia, Pennsylvania 19111
215 - RA. 5-1106

MEETINGS: FOURTH WEDNESDAY OF EACH MONTH AT 8:00 P.M.

OUR RETIRING PREZ SEZ



The June meeting was the last one at which I officiated as your president. The Gavel of Office is officially turned over to your new president W3LHF at the start of the July meeting which will be held at the Davis QTH on Wednesday, July 19, 1967.

It has been a privilege to serve the Club, and I have enjoyed doing it. The cooperation of the officers and membership in getting the many Club projects completed during the past year was heartwarming. It is my sincere wish that you continue to give your wholehearted support to your new president and club officers. In doing so you will insure that your Club will retain its eminent position as the foremost VHF club in the country, if not the world.

We have tried in the past year to introduce new blood (and younger) into the handling and managing the club tasks. It is our hope that this trend continues because, in this way, the Club is sure to prosper and continue for years to come.

W2EIF, Jo

PACK RATS TRIP TO ARRL HDO on Sept. 16. A bus will leave N.E. Airport for ARRL Hdq., Newington, Connecticut. Be on it if you don't want to miss the fun. We have our choice of a 41 or 49 passenger, air-conditioned bus. When available space is gone, that's it. Price \$12.50 per person which includes dinner in Connecticut and the bus ride. First come - first served. Deposits are now being accepted by W3CL and WA3BIV. The bus will leave the airport at 7:00 a.m., arrive in Newington about noon. We will leave Newington at 8:00 p.m. Nuff said. Get up the loot if you're going.

OUR PREZ Sez



I would like to greet everyone after taking office as president of the finest VHF radio club in existence. There is no doubt in my mind that the "Pack Rats" have made a great contribution to VHF activity in the whole country, and, in particular, to the East coast. Our success has been due to the dedicated leadership of a host of outstanding VHF hams and to the fine spirited cooperation that all the members have shown in all of our activities. Nothing less could have brought us to the top in all areas so quickly, and nothing less will keep us there. By working as a team we have all but bowled over the opposition in the January contest, and we are on or near the top in every other activity; contests, field day, picnic, or Ladies night. The objective of your president will be to keep us there, and to make new strides forward in several areas of our organizational plan to foster VHF activity.

It is a bit early to make any assesment of the exact state of all of our affairs. On the surface, I see a few things which need some attention; but on the whole, we as a Club are in good shape. The last administration did a good job and several new innovations have worked out well. I would like to see a few more of our members working on the various committees, and to this end, I expect to make a few new appointments shortly. I keep seeing the same faces anytime there is a job going on. Also, I would like to see a good Club construction project. Who would like to build what? Let's hear your ideas.

One last item, please keep in mind that this Club is in existence for the benefit of its members and for no other reason. The "Big Brother" plan is still in effect, and all the resources and experience of a large part of the Club are at your disposal to solve any problems that you may have. Don't hesitate to speak up and ask for help. You will get it.

That's all for now, 73, and see you at the next meeting. Let's all talk up the picnic.

W3LHF, Dave

THE TRANSMITTER HUNT

The Pack Rats' Monthly Transmitter Hunt was held on July 23, 1967. Hiders were K3UJD, Mario the Ivyland Kid, ably assisted by his 432 buddies W3CJU, Don and K3BPP, Walt. The hiding place was located in Furlong, Pennsylvania. For you city dwellers who know only route numbers, this is about one mile from the junction of Routes 202, 413 and 263. A common hint was that the place was going to the dogs. (The owner of the property breeds Dalmations). First team in W3CAG Dave and his OM, W3MFY Pres, assisted by Howard who's call I didn't get. Elapsed time - 45 minutes.

The second team in on 6 meters was WA3EPS Mort, and K3JJZ El. Their elapsed time 1.5 hours. By standing in the road we were able to call in K3MM Lee, his harmonic, and K3DUC Phil

Who was first on 2 meters? Tweren't nobody hunting on two.

Next hider of course is WA3CAG Dave and W3MFY Pres. Look out fellows, it could be in quicksand.

of stolen Radio Equipment are found by police, and there is noway of making a determination of ownership.
NOTE TO MOBILE HAMS
from KASS Communicator

Make sure that you have, preferably in writing, confirmation from your insurance PG 3 company that your mobile ham gear is insured against loss by theft. Try to have the gear named in the policy, and save the sales slips when you purchase anything that will be used primarily in the car. This should include antennas, microphones, field strength meters, as well as major pieces of equipment. Also make a practice of recording the serial numbers of equipment you use in the car. Often large cartons

improve that low power dummy load?

E. O'Fox

from: Harmonics - 1966
S. Jersey Radio Ass'n.

Typical approach used when a low power dummy load is required for power adsorption and output indication is to grab a #47 pilot lamp and RF connector, solder them together, and plug it in. The circuit is then tuned for maximum brightness of the lamp and all is well -- that is, until the power generating unit is connected to its normal load. At that time, a major retuning may provide proper output ... if you're lucky! More often, the result is a rather disappointing operation, never being quite sure what the problem is, or even being aware that a problem exists. The cause? How about that dummy load using a #47 lamp?

An examination of the pilot lamp tables shows that a #47 requires 150 ma @ 6.3 volts. A quick check via Ohm's law shows this to be an equivalent resistance of 42 ohms and a power dissipation of one watt. Assuming the lamp is to be used to serve as a dummy antenna of 52 ohms, a small mismatch is evident; this mismatch will increase somewhat if the lamp is to be used as a dummy for a 72 ohm antenna. However, the situation is even worse if the lamp is not working at full brilliance. The tungsten filament is a non-linear device, the resistance of which increases as the current increases. At low currents, the resistance is low indeed; the table below will reveal just how far it can change. Is it any wonder that the low power transmitter you built doesn't work across town, even though you saw the filament of that #47 lamp glow?

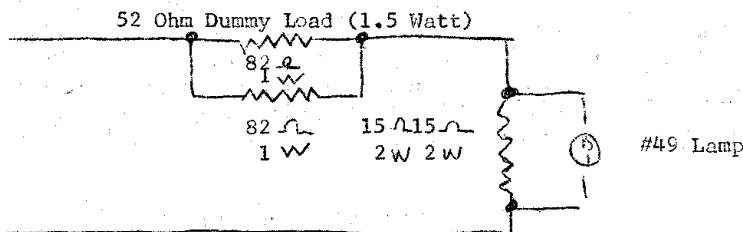
Figure 1

Equivalent Pilot Lamp Resistances

Voltage	100%	75%	50%	25%	Percent of rated voltage
#47 Lamp	42	37	31	23	Computed resistance (ohms)
#49 Lamp	33	30	23	17	Computed resistance (ohms)

The solution? Look at the #49 lamp, rated at 60 ma @ 2 volts. It, like the #47, exhibits quite a change in resistance with variations in voltage. However, it has the advantage of being much more sensitive than the #47, thus we can "swamp out" much of the resistance shift. A dummy load of 1.5 watt rating, using the #49 with resistive swamping, is shown in Figure 2.

Figure 2



The #49 lamp has a nominal resistance, at full brightness, of 33 ohms. This resistance, in parallel with the 15 ohm resistor, provides a resultant of about 10 ohms, which, in series with the 41 ohms (two 82 ohm resistors in parallel), totals approximately 51 ohms -- a very close match for the nominal "52 ohm" antenna. At 0.25 volts (a barely noticeable glow) the resistance of the lamp will drop to about 10 ohms. Computing the total dummy load resistance at this input results in a resistance of 47 ohms, a very slight change indeed. This unit, as shown, will handle about 1.5 watts with a very minimum resistance change from hot to cold; therefore, it remains a close match for a 52 ohm antenna. For a 72 ohm match, change each of the 82 ohm resistors to 127 ohms. There has been no mention here of reactances, but that's another story.

?? WHY NOT?? Try this dummy load on your next low power project!

Project Oscar Inc.

Submitted by
John B. Power, W2AXU

EURO-OSCAR: Tests and evaluations of the Euro-OSCAR satellite package which were received in April are still proceeding. They are, however, delayed in this work much of the time by the time required to exchange notes with DJ4ZG, the builder. Progress is being made slowly; consequently a launch of that unit is not imminent at this time.

AUSTRALIS-OSCAR: Three members of the development group which designed and built Australis-OSCAR escorted their satellite package to OSCAR headquarters in late May. The Australis-OSCAR is a beacon and telemetry system which radiates 100 mw on 144.050 MHz and 250 mw on 29.450 MHz. The signals will be modulated with audio frequencies which provide the telemetry data. Several telemetry information channels are transmitted sequentially and are followed by a pair of HI's which serve as the identifier and which provide the reference point in the keying sequence. The seven telemetry channels provide one channel each for three attitude sensors, two temperature sensors, battery voltage and battery current.

The power supply is a battery and no provisions for recharging are available, consequently operating life will be limited to the initial battery charge which is expected to last for several weeks. A command control system is incorporated which will permit the ten meter transmitter to be turned on and off. Present plans call for turning it off on weekdays and on during weekends. Several key stations around the world will be designated control stations.

MASS: In addition to the telemetry and the command control system, this satellite includes an experiment call a "Magnetic Attitude Stabilization System" (MASS) which, if successful, will provide a technique for controlling the orientation of the satellite with respect to the earth. One part of their experiment involves the use of lossy magnetic material which will dissipate energy as the satellite tumbles in the earth's magnetic field. The effect of dissipating energy in their way is expected to slow the tumbling rate of the satellite. The remaining part of this experiment is the inclusion of a magnet in the satellite package which will induce a force to cause the satellite to line up with the earth's magnetic field. The effectiveness of the MASS experiments will be shown by the data transmitted by the three horizon sensor telemetry channels.

Transmitter power levels utilized in this satellite are suitable for relatively low altitude operations - about 1000 miles maximum. Antenna polarizations are linear.

Some modifications will be made to the satellite package. These will be minor. Then comes the environmental testing. Successful completion will provide a package for launch. The time required for the evaluation and launch arrangements is such that it is unlikely that our OSCAR 5 will be up this year.

FUTURE PLANS: A 2 to 10 meter translator is progressing. An operational system is in existence and some preliminary tests have been made. Much yet remains to be done before a flyable system is available.

Several other OSCARS are being proposed or are being worked on in the earlier stages of development. These OSCARS should provide amateurs with a continual stream of satellite operations.

8 8 * * * * *

ARRL BULLETINS

The United States has concluded a reciprocal operating agreement with New Zealand, effective June 21. The agreement includes the Cook Islands and the island of Niue, but does not include the Tokelau Islands. The full list of countries with reciprocal agreements will appear in August QST AR.

Word has been received from FCC that W3DWG/VR6 has received permission to handle third party communications during his period of stay on Pitcairn Island. This is considered to be a temporary exception to the general ITU ban on third party traffic. His operation is expected about the last week in July. AR

Among the many operating aids available without charge from ARRL are the following, all designed to aid your operating effectiveness: Pointers for Good Operating, WAS map and card record, phonetic alphabet, ending signals, RST system, DX code, contest QSO record, safety code and supplement, QN signals for c.w. net operation, GMT time conversion card, amateur message form card, and station ready reference information aid. Any or all of these are available without charge from the ARRL Communications Department, 225 Main Street, Newington, Connecticut 06111. AR - 5-

The shattering rainstorm of Monday, July 10, saw one of our members become a hero. K3AUH, Alan, was on Edgchill Road in Glenside, on his way home from the salt-mines during the height of the rain; when coming down a hill, he saw he would not get through due to the deep water. He pulled to the side of the road to gather his thoughts as to how to proceed when a lightening bolt struck a house just across the street, ripping off part of the roof and starting a fire. When Al heard the engines he knew he had to get out of his position and so proceeded to a gas station on the high ground at the corner. As if being so close to a lightening hit wasn't enough of a shock, imagine what happened when he saw a car, carrying four children come down the road and slide into the flooded intersection which was now under five feet of water. Without a moment's hesitation, Al swam out to the car, wrenched open the rear door and took the two children from the car and swam back to the gas station. The woman driver followed his lead with the other two children. The owner of the gas station provided cloths and overalls to dry the children. Alan wended his way home in his wet clothes, having performed a deed of valor. He is to be commended.

THE STORM

K3JJZ, Elliott Weisman

I don't have to give you the actual date because you all know which storm I'm talking about. It was the Monday that almost made Abington Township a disaster area.

- 1720 - Left salt mines (West Point, Pennsylvania). Sky looks awful dark, wonder if I'll get home before it rains.
- 1750 - Guess not; rain starting; location Butler Pike and Susquehanna Road near Ambler. More surprises -- vacuum side of fuel pump starting to give out, can't get the windshield wipers to go as fast as they used to. Nice time to find out.
- 1755 - Really is pouring; driving at 30 MPH and can just barely see the center line of the road. Hey, look what's up ahead -- water. Of course it's water, you big dope. What did you expect in a rain storm? Vodka? Anyhow, the miniature river across the highway was about a foot deep and there was a little M.G. stalled in it, and no driver. Traffic was able to move through the area but we did sort of tongue in cheek. We're through, starting up hill. Well, that takes care of that. Cheer up, Dad, more to come. Hey maybe I ought to stop and visit Mort, W3EPS. Nope, I'll keep poking along and see if I can make it home. Wow, here we go again. Too late to go back to Mort's place. The river here is higher. Several cars are over on the side of the road. I guess their ignition systems got wet. Sure wish I would have waterproofed mine. Oh well, too late now. The great decision is made and we start through the river, second gear, clutch only half way out, and the engine at a semi-race. Water looks to be about 15 inches high. Finally we got through, but, good grief, no brakes. We ride the next block with the emergency brake 3/4 engaged in order to dry the brakes.

Over the next ridge on Susquehanna Road we can see severe problems adjacent to the Roslyn Elementary School. There is more than two feet of water. There is a car floating sideways in the road and traffic is not moving in either direction. I've never seen anything like this. And it's still pouring. Well, I'm not going to push my luck. Over to the side we go and park. The ground at this point is relatively high and we were in no danger of floating away.

Before I shut off the ignition, I'll see if I can get a message home. On goes the sixer. "CQ with traffic from K3JJZ mobile in Roslyn." No answer and we tried again. Nuts, the six meter crew has flown the coop due to the electrical storm. Gee, all those guys playing with high voltage all the time afraid of a little lightening. What would Ben Franklin have said?

- 1820 - Try the sixer again. No dice. The water is getting higher in that intersection and the rain is still coming down. Guess I'll take a nap.
- 1900 - Rain is letting up and the water level has diminished somewhat but still too high for us to attempt a crossing. No more lightening so let's try the sixer again. "CQ with traffic from K3JJZ mobile in Roslyn. What say you fraidy cats?" "K3JJZ mobile, this is W3CL. What and how are you doing, El?" "I'm about two blocks away from the Roslyn Elementary School on Susquehanna Road. The water level in the road is still more than two feet and I'm not going to attempt a crossing until it gets down to the one foot level. Will you call Lorraine for me and tell her that I'm all right." "OK, stand by one." ... "K3JJZ mobile, this is W3CL." "W3CL from K3JJZ mobile, go ahead, Harry." "I've tried three or four times but the line is busy." "OK, I'll give you the number of a neighbor. You can call him and he can ring Lorraine on our house to house intercom. The number is 622-9622." "W3CL from K3JJZ mobile." Time passes. "K3JJZ mobile, this is W3CL. El, I have Asher on the phone; however, he says that he cannot call your wife on the intercom because the

THE STORM continued

power is out in the entire neighbor-

hood." "OK, Harry, ask him to call her when she gets off the phone." "Roger. How does the situation look now?" "I think I might be able to make it now. I'm going to give it a try. Thanks for the phone call, Harry, I do appreciate it. W3CL, K3JJZ mobile is off clear and moving. 73." "OK, El, take care and drive safely. W3CL clear."

Well, that was only the beginning. After that I was called by K3DUC and WA3EP9, WA3LZD and K3OEJ, all offering moral support and some offering physical assistance if it was required. Phil, K3DUC, offered an alternate route to the home QTH which turned out to be excellent.

I finally arrived home at about 2030. Still no power. We ate by flashlight. Thank heaven we have a gas rather than electric range.

At 2115 there was still no power and the XYL was sort of worried about the meat in the freezer. Certain of the neighbors were fit to be tied, as if that helped. I thought about the net being on and decided to sign in from the car.

"This is W3CL net control Pack Rats standing by for any late comers." "W3CL, W3CL, from K3JJZ mobile." "K3JJZ mobile, this is W3CL. El, haven't you found your way home yet?" "W3CL, from K3JJZ mobile. Don't get excited, Harry, we are home. However, power is still off in the immediate area so we thought of signing in from the mobile. W3CL, this is K3JJZ mobile, regards to all." "K3JJZ mobile, this is W3CL. OK, fine, glad you were able to make it home safe and sound."

In the meantime, the P.E. truck had pulled up across the street and the ladder was up against one of the poles. Yours truly decided to investigate the problem. I walked over and asked the lineman what the problem was. Apparently a tap on the transformer had burnt off and he was trying to get through to the dispatcher to report it. Now, if you think 6 meters is bad during a band opening, you should have heard the P.E. channel after the storm. It took the lineman one half hour to get through to the dispatcher. Now, just at the time when the dispatcher was giving the lineman instructions along came the neighborhood B.M. (big-mouth). I might say that there is no love lost between this cat and myself due to an old TVI sore that never healed.

B.M. - "When the X*#@! are going to get some &*@\$! lights around here. I'm a taxpayer: I know my rights."

Me - "If you shut your big mouth, the man might be able to hear his instructions."

B.M. - "I might have known you'd side with him. You guys are all alike."

Anyhow, another truck was sent out. The linemen repaired the break. We were finally able to put Number 2 son to sleep at 2220. (He wouldn't go to sleep without his night light which of course operated on AC.)

And yours truly? I got on 6 meters because I knew by the position of the antenna down the street that Big Mouth was trying to watch channel 2.

REPORT ON OUTDOOR MEETING AND "WHITE ELEPHANT SALE"

The regular monthly meeting of the Pack Rats was held on the 19th of July at the QTH of W3LHF who was also the auctioneer for the annual "White Elephant Sale". This affair consists of the sale of good useable but no longer needed items donated to the Mt. Airy VHF Club by Pack Rats and their friends. The objective of this sale, in addition to making money for the various activities of the Club, is to move around those "goodies" which may be laying around gathering mold and get them into the hands of other members who, hopefully, will put them to good use.

This year's sale probably will top all other years both in the total amount (about \$5.00) and the number of both very nice items for which the Club is grateful to all its benevolent friends and the usual assortment of bizarre items good for a laugh now and then. Wonder where all those electro-mag speakers came from? And that crystal set with coil wound on oatmeal box ... wow. Not to mention that bunch of old transformers, both iron and air. Everything donated was greatly appreciated, fellows, and a swell time was had by all.

Keep in mind the regular auction on September 20th at the same location, this sale being for the benefit of the individual putting up the material. Also, there is a "Silent Auction" at every meeting for the benefit of the members. Here's your chance to turn some of those good ham sleepers into ready cash.

Left over from the sale are about five or six years of old QST and CQ mags. The Club will be pleased to let these go for a nominal donation at any of the next couple of meetings.

MEETING NOTICES

The next regular meeting of the Pack Rats will be at the QTH of W3MFY, Pres Funk on August 16, 4850 Magnolia Avenue, Trevose, Pennsylvania, at 8:00 p.m. There will be slides and films. Bring chairs.

The next directors meeting will be held at the QTH of W3MFY, Pres Funk on August 9 at 8:00 p.m.

* * * * *

DID YOU KNOW

W3MVF, Dave, is in Jeans Hospital, Room 231. Send him a card.

That Dave's harmonic Teddy was in auto accident?

K3G0Z, Herm, was in Rolling Hill Hospital for ten days. He is home now and coming along slow but sure. (His words not mine.)

Applications for license renewal for both station and operator can be obtained from W3EAO.

You can save 50¢ on renewal of ARRL membership by obtaining a form from W3MVF, Dave, our Treasurer.

* * * * *

NEW MEMBERS

K3EUC, Philip R. Delano (Phil)
XYL Patricia
842 Edgemoor Road
Ardley, Pennsylvania 19038
TU 7-9143

WA3HIT, Paul J. Rilling (Paul)
5750 Rising Sun Avenue
Philadelphia, Pennsylvania 19120
PI 2-5348

W32NOK, Robert J. Jaep (Bob)
1924 Bryn Mawr Avenue
Haddon Heights, New Jersey 08035
547-0753

K0ZZM, Charles Benavides (Chuck)
XYL Pat
P.O. Box 186
Spring House, Pennsylvania 19077
643-2727

W32IOE, Luciano Arnao (Lou)
XYL Dolores
515 Kossuth Street
Riverside, New Jersey 08075
HO 1-4346

* * * * *

SWAP SHOP

New 10 ft. tower - mini beam, 6-10-15-20, CDR rotator with leads -- \$50.
Johnson Valient 80-10 M -- \$100.

W3DJV, Fred Kramer
6649 N. Opal Street
Philadelphia, Pennsylvania 19138
215 WA 4-4781

4CK250 new in sealed envelopes - Jan. -- \$6.00 each.

K3JJZ, Elliott Weisman
8533 Algon Avenue
Philadelphia, Pennsylvania 19152
PI 2-3525



W3KKN, Ernest Kenas
2823 Old Welsh Rd.
Willow Grove, Pa. 19090
