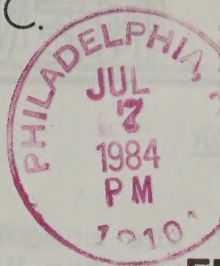


remove with care

# HOLMESBURG AMATEUR RADIO CLUB, INC.

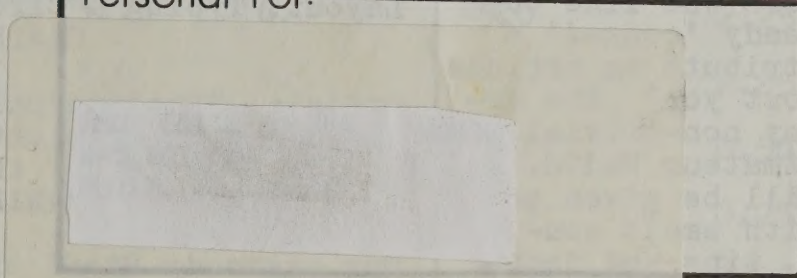
(a non-profit corporation)

P.O. BOX 6253 ~ PHILADELPHIA, PA. 19136



**FIRST CLASS MAIL**

Personal For:



# NEWSLETTER

JUNE

1984

The Newsletter is a publication of the Holmesburg Amateur Radio Club, Inc. Anything that is printed in this paper may be reprinted providing the proper credit is given.

Deadline for Articles: Delivered to the P.O.Box 6253 address by the 15th of each month.

Editor reserves the right to edit, reject, reduce, etc. all items to be published.

SUBSCRIPTION RATE: \$3.00 per year "BUY/SELL/TRADE/Etc.": FREE

### 1984 CLUB OFFICERS AND TRUSTEES

PRESIDENT:	KR1M-Steve Sosson	1 Year	TRUSTEE:	WA3IFY-Jay Kuperman
VICE-PRES:	WA3AOP-Richard Sambenedetto	2 Year	TRUSTEE:	WA3OQR-Charles Zeager
		3 Year	TRUSTEE:	W3QXT-Bill Soble
TREASURER:	KA3DNJ-Claire Kuperman	CLUB HISTORIAN: Edith Rosner-W3AAU		
SECRETARY:	NONE	645 Artwood Drive		
		Phila., PA 19115		

remove with care

# NEWSLETTER

## FROM THE EDITOR

Mark, KC3JV

I have undertaken the somewhat formidable task of getting the HARC Newsletter going again on a monthly basis. To accomplish this I need a group of club members who like to write. I have already 'conned' a few members to contribute an article per month. How about you? The articles may cover any non-trivial subject dealing with Amateur Radio. Particular favor will be given to articles dealing with small construction projects, tips and techniques, computer programs for radio and unusual operating experiences of general interest.

Got a 'beef' or an opinion!! The Editor also welcomes your opinions positive and negative, dealing with the Newsletter or club activities. So just don't sit there and grumble. Write a letter to the Editor. Letters to the Editor should be concise and to the point! Address them to the Club Mailbox, c/o the HARC Newsletter.

To save Claire from being swamped, please type, if you can, all articles, etc. on columns 4" wide by 9½" long. Newsletter sheets may be picked up at Claire's, call 289-4531.

The Editor

## BOARD MEETINGS

July 26, 1984

September 6, 1984

First General Meeting - September 9, 1984, Sunday at 10 a.m.

Best Western Motel, Roosevelt Blvd. and Borbeck St. (Unless otherwise notified)

## HARC NEWSLETTER STAFF

Editor-in-Chief, Pressboy and General Nag to Late Reporters -  
MARK ROTHSTEIN, KC3JV

Layout, Typing & Circulation...etc.  
CLAIRE KUPERMAN, KA3DN

Official "Philadelphia" Lawyer for the H.A.R.C. Newsletter and the "Golden Throat" of the Wednesday Night Net -  
BERNIE HEINZE, WA2BAK

Our eveready Staff of "\*\*\*\*\*" Reporters

DICK LEVY, WB3EVY  
DAVE PASCOE, KM3T  
JOE PEARLSTEIN, WA3IJZ  
PAUL ROTHMAN, K3RBO

## TIDBITS FROM THE TECH COMMITTEE

Our repeater is getting worn out and will need replacement in the next two to three years. We are considering replacing it with a new "State of the Art" Repeater that is microprocessor controlled.

Some of the features available to club members might be:

- \* Auto Dial (Access to frequently dialed numbers with a few key-strokes)
- \* Voice Synthesized time and date.
- \* Automatic announcement of Club Bulletins or notices of the Net or Meetings.
- \* 440MHz Cross Link
- \* Low Band Cross Link

As you can well imagine, this all costs money!! A set-up of this type could run as much as \$5000.00! It is time to start thinking about raffles and other fund raisers to start in the Fall.

73's

Bob, KB3SM

# NEWSLETTER

## ANTENNA COMPARISONS

### Field Strength Readings

Distance	RD	SD	HQ	1/4	5/8	CC
1'	4.5	3.75	6.0	5.0	2.25	8.0
2'	3.0	3.0	4.5	3.5	2.25	0.75
3'	2.25	2.0	3.0	1.75	0.50	0.75
4'	1.0	1.0	1.5	1.5	0.75	0.50
5'	1.0	1.0	1.0	1.0	0.50	0.50

RD = Regular Duck  
 SD = "Stubby Duck"  
 HQ = Helical Quarter Wave  
 1/4 = 1/4 Wave Whip  
 5/8 = 5/8 Wave Whip  
 CC = "Coffee can" 1/2 wave vertical

Paul, K3RBO

.....

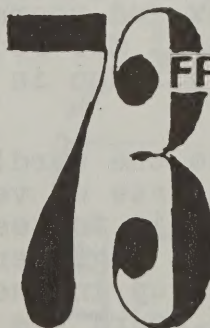
### WHAT'S THE ODDS???

What's the odds of two stations in different countries with the same suffix contacting each other?

Whatever it is, they were in Jay Kuperman's favor that day!!

ITALY  
 AUTONOMOUS REGION FRIULI VENEZIA GIULIA

# IV3 IFY

**73 FROM**  


JAY KUPERMAN  
 1934 DEVEREAUX AVENUE  
 PHILADELPHIA, PA 19149

# WA3IFY

USO WITH	DATE	GMT	MHZ	RST	TWO WAY
WA3IFY	16-XII-82	17 CC	28	5-6	SSB

we have the same suffix (hi)  
 PSE - TNX OSL from Dino  
 73 dr Jay



DINO ROCCO  
 Via Martignacco, 162/4  
 33100 UDINE - ITALY

Editors Note: Udine is located in the northeastern part of Italy, near Yugoslavia.

# NEWSLETTER

## CONTESTING AT 2300 FEET

By Joe Pearlstein, WA3IJZ

Everyone knows that the higher the antenna (especially UHF & VHF), the better the chance of being heard. This fact was proven to me during the VHF QSO party which took place the weekend of June 9-11 of this year. An old friend, Steve White (WA3IAO), current President of the Suburban Amateur Radio Club, solicited my CW help in the event. Not being a con- tester and thinking of VHF as an intercom, needless to say, my response was under-enthusiastic. Not only couldn't Steve take No or Maybe for an answer, but he started to 'sell' how important this event was to the S.A.R.C. and since he was aware that this was our first Radio Club as 14 year old kids, he tried the "Jewish Mother Guilt Trip" on me. It worked!

After he finally got a committment from me, he told me to check out the cover of QST (May, 1984). Once I understood that all those towers, stacked Yagi's and even a Parabolic Dish were on the top of Mt. Pocono (approx. 2300 ft. elev.), belonged to the S.A.R.C. and that they took 2nd place in the Multiop category in 1983, I got the feeling that these guys were serious!

The Saturday of the contest, Dave' (KM3T), my girlfriend Rox and yours truly, drove to the site at Mt. Pocomo (where the Camelback Ski Run is located).

Impressive is not quite the word! I cam down with a severe case of vertigo and was actually afraid to leave the car! In a cold sweat, I gingerly walked over to the 220 setup in one of many campers. Once I heard the sounds of CW coming from inside, I got into the spirit. These guys had the works! On 6 meters, imagine a KW and a 6 element wide-spaced Yagi! On 2 SSB & CW, picture another KW and 4 stacked (God knows how many elements) Yagi's. There were equally impressive setups for 2 FM, 220 SSB,

CW and FM, 440 CW, SSB and would you believe 1.296 GIG + 2.304 GIG?

We had a Blast!! Dave and I as 'guest' ops went through the nite on various bands. One memorable moment was Dave (the true contester that he is) wearing headphones, one hand on the tuning dial, absolutely at his limit! Dave had fallen into a deep sleep out of utter exhaustion while in the operating position on the 2 meter equipment!

Honestly though, it was one hell of a lot of fun. During a break on Sunday morning, I wanted to see if I could make it into the 685 repeater. I was 90 miles away, but maybe the 2300 foot elevation would help. To my surprise, I was "DFQ" into not only ours, but several Philadelphia machines with 2 watts and a rubber duck!

I don't know how well the Suburban Amateur Radio Club did this year in the points standings, but you can be sure it wasn't too shabby - and it's nice to know that two Holmesburg Amateur Radio Club ops helped!!

.....

## VOLUNTEER EXAMINER PROGRAM MOVES

### AHEAD

If you are interested in becoming a Volunteer Examiner, please get in touch with the following coordinators:

Region 2: Jim Greer, KK2U, Metroplex Amateur Communications Association, Leonia, NJ 07605 (201) 592-1579

Region 3: Howard F. Lehnert, Jr., K3IOG, President, Laurel Amateur Radio Club, Inc., Box 91, Annapolis Junction MD 20701.

(Volunteer Examiner Applications are available from Jay Kuperman, WA3IFY)

# NEWSLETTER

## ANTENNAS FOR TWO

By Paul Rothman, K3RBO

I have been writing articles for this newsletter for several years and most of my articles involved gossip or little tid-bits of news about various club members and their friends. Well, I guess that subject matter is behind me, because I was asked by our illustrious new Editor to prepare an article of a somewhat different nature; of technical interest to the members of the Club. I thought for awhile, and came up with a topic that is probably near and dear to the hearts of everyone who operates on two meters, and who owns a Handi Talkie.

I decided to prove to myself that there is, or is not, a difference between the various antennas which are marketed for HT's. The question was "Are these stubby ducks and cool ducks really what they are cracked up to be in the advertising one sees in the ham magazines?" In order to determine this I decided to run some basic tests to get some idea of the operating characteristics of the various types. I decided to use field strength measurements as the evaluation method. I placed the HT, an ICOM 2AT, on the top step of a stairway, with the top of the transceiver level with the floor (see sketch). With a simple field strength meter, I took readings at various distances at one foot intervals from the rig. The results are tabulated below. This test proved some things - mostly that I need a better field strength meter and that measurements must be taken at further distances from the antenna. With my setup, I couldn't get any further away than 5 feet, and I couldn't discern any difference between the antennas at this distance.

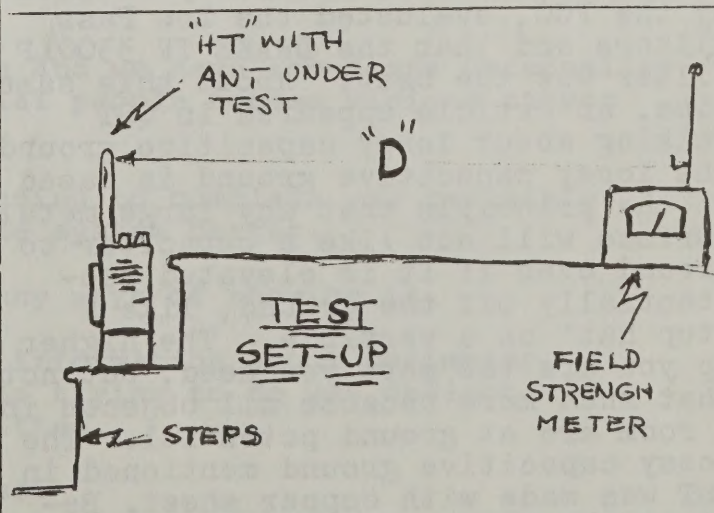
I should state the antennas I tested. The first was the standard duck that comes with the 2AT. Second was a 'stubby duck' by Tuned Antenna

Co. The third was a 'helical quarter wave' duck by Larsen. The fourth was a quarter wave whip. The next was a 5/8 wave whip by Tunes Antenna. And, last but not least, was my creation from 75 Magazine, a 1/2 wave radiator with a coffee can 1/4 wave matching section and base.

The results were interesting in two areas: The 5/8 wave whip registered very little field strength from 1 to 5 feet. It was by far the lowest measurement throughout - why? The coffee can vertical provided a very high reading close up, but fell below the others at 2 through 5 feet. The helical quarter wave registered consistently higher readings over the others.

Conclusions: There really are differences between antennas for HT's. The best performer seems to be the Larsen helical quarter wave. It is smaller than a 1/4 wave whip and flexible like a rubber duck and only slightly longer. The stubby duck seems as good as the standard duck. The 5/8 wave seems to be the most disappointing, based on my results. Maybe I am missing something..... Your comments would be welcomed....

73, Paul, K3RBO



# NEWSLETTER

## TVI FREE AT LAST

By Mark Rothstein, KC3JV

Do you have to curtail your low band 'Air Time' due to TVI?

With a few simple techniques and the right low pass filter you can operate anytime!!!

I was plagued with one neighbor constantly complaining of TVI. I finally had the FCC come down with a spectrum analyzer. My harmonics were below the 60 db down (as guaranteed by ICOM) and the FCC required 40 db down for new equipment. However, I had a harmonic from 40 meters beating against the Channel Six video signal, which was faintly visible against a pastel background. The engineer from FCC said that if I could clear up my own T.V. they would consider me TVI free. "But, wait a minute," I protested. "If I'm cleaner than the requirements, why do I have to do anything?" It seems like there is always a catch; there is a law that states... if you generate any interference to a receiver of 'good-design' then it must be cleaned up.

The engineer was one of the "good guys" (a Ham himself) and took it upon himself to tell me that preliminary information, not yet published by the FCC, evaluated the Low Pass filters and that the DRAKE TV 3300LP filter was the best. About this same time, an article appeared in QST talking about lossy capacitive grounds. The lossy capacitive ground is based on the principle that any large metal surface will act like a capacitor to ground even if it is elevated substantially off the ground, like a 'top hat' on a verticle. The higher up you are the more you need, but not that much more because all objects in a room are at ground potential. The lossy capacitive ground mentioned in QST was made with copper sheet. Besides being expensive, the copper sheet is hard to find. I chose aluminum flashing, which is considerably

cheaper. I covered only the part of the table that the equipment sat on and the sides with flashing. Then, I attached ground straps to all the feet and equipment ground to the aluminum with a staple gun. I also made a shield for all the cables with a hinged top. The whole setup is shown in Figure 1.

## STATION SET UP

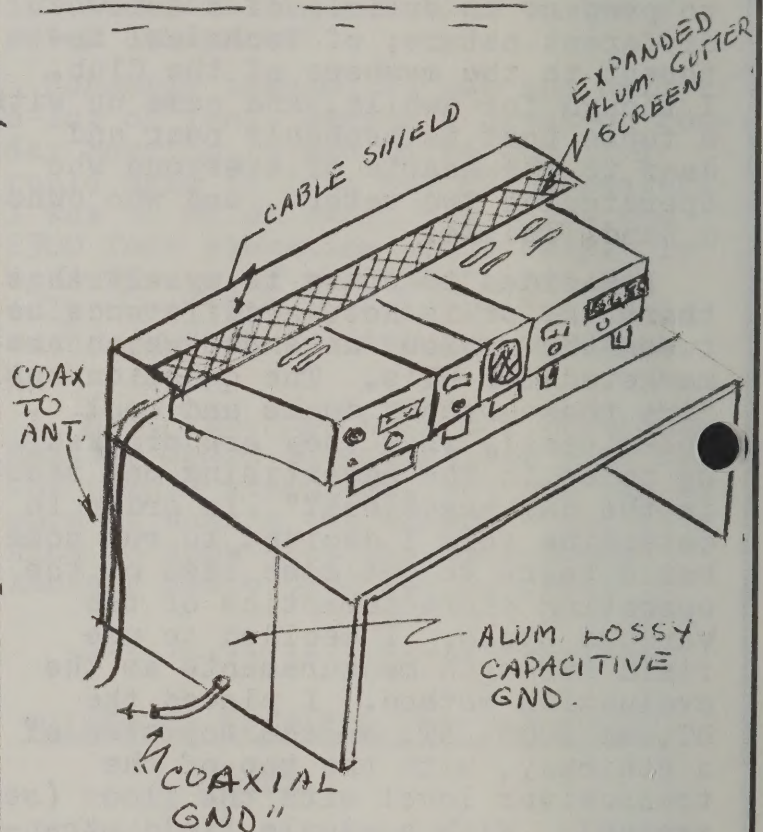


FIGURE 1

Finally, the lossy capacitive ground had to be brought out to a regular earth ground which was a 10' Copperweld ground rod, located about 15' away, just outside my basement window. The problem with running ground wire longer than  $\frac{1}{4}$  wave of the harmonics is that it becomes a radiator.

## NEWSLETTER

How do you make a 15' run appear only inches long? The answer is in a 1983 issue of "73" Magazine; use a 'coaxial ground'. The coaxial ground is made from 95% braid coax, such as RG 8X with the outer braid bypassed to the inner conductor with 1000V 0.01uf capacitors at each end. (shown in Figure 2)

All the cables were held in contact with the aluminum by tape and coax holdowns available from Radio Shack.

When, at my request, the FCC came out again, my harmonics were in excess of the 80 db down, guaranteed by DRAKE! In case you have forgotten.. 80 db is 100,000,000 or one hundred millionth of the original signal!

In a forthcoming issue, Bernie, WA2BAK and yours truly will discuss how to handle yourself with your neighbors and the FCC!

## COAXIAL GROUND

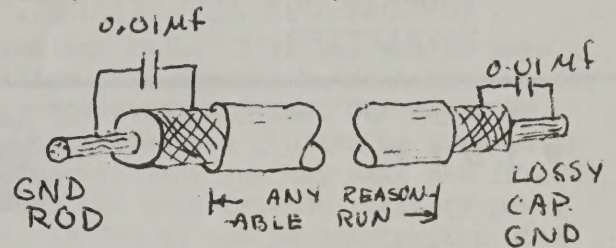


FIGURE 2.

WHY BOTHER - WHO CARES

DE: K3JJZ

If you can't take criticism go to the next article because you won't like this one.

How one group of nice sociable people can be so lazy is more than I can understand.

Talk on the repeater, have breakfast before a meeting, and we have the greatest group going.

Let a portion of the system go down and we have immediate personality changes. All of the sweet, congenial people become vicious street fighters.

However I believe that if you are going to complain you certainly ought to be willing to help make the system better.

You say you are? You sure have funny ways of showing it.

It wasn't too long ago I asked for information about perimeter coverage of the repeater. All I was trying to do was collect information for the technical committee.

Not one - that's right zero response.

They say you get what you pay for, well that's not true, you all have been getting a lot more than you are paying for.

# NEWSLETTER

SUPPORT OUR ADVERTISERS. TELL THEM YOU SAW IT IN THE HARC NEWSLETTER.

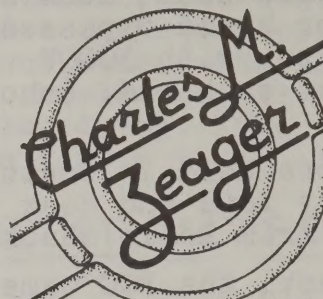
W3DIP



**FIELDING O. L. WATERS**  
Specializing In Pest Control  
BENSALEM, PA.

PA. STATE CERTIFIED

(215) 757-5743



WA3OQR  
*Pressure-Sensitive Labels*  
*Rubber Stamps*  
Tags & Decals  
*Fast Service*

WA3OQR  
(215) 698-1060  
9908 Bustleton Ave. (B-9)

Post Office Box 14568  
Philadelphia PA 19115

NE 7-8329

W3HK

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

4607 CONVENT LANE  
PHILA., PA. 19114

**AZDEN PCS-4000**  
2 METER TRANSCEIVER  
AND PCS-300 2M TALKIE

DISCOUNT PRICES

10 AMP Regulated Supply  
10 AMP Continuous \$52.

Service Manuals

PCS 4000 \$9.00  
300-3000 \$5.00 EACH

Order 24 hours a day (215) 884-6010  
FREE UPS - N.P.S. Inc. WA3IFQ  
1138 BOXWOOD RD. JENKINTOWN, PA. 19046

Wm. "Bill" Pinkenson

WB2IOY

*Pants Plus Inc.*

302 Market Street • Philadelphia, PA 19106 • (215) 592-0257

Importers and brokers who bring radio frequency devices into the U.S. must report these devices on FCC Form 740. Among the more interesting "radio frequency devices" are computers, industrial heaters and ultrasonic equipment.

The purpose of FCC Form 740 is to ensure that imported RF devices meet FCC technical standards, thus minimizing the risk of harmful interference to existing radio services.

Eye Exams  
Contact Lenses

Complete Eye  
Care Facilities

**Dr. Neil S. Halpern**  
OPTOMETRIST

K3OAO

Deputy Opticians  
12039 Bustleton Ave.  
Phila., Pa. 19116

673-1267

YOUR AD COULD  
BE HERE!  
CALL JAY WA3IFY  
COST \$10/YEAR



## NEWSLETTER

NUTS, BOLTS, AND OTHER LOOSE THINGS

Have you ever wondered where you CANNOT operate amateur radio? I'll bet you'll have some difficulty coming up with more than a few activities. The way our handi-talkies have been used really makes one think you can talk to anyone anywhere, anytime. Our repeater, along with others, makes this entirely possible. From a hospital bed you can be cheered up by fellow hams. On a flight across country, with pilot permission, you may make new friends from 30,000 feet. Even soaking in a bathtub you can still QSO with friends (battery power only of course). There are so many more areas ham radio is fun to use in combination with other activities we could list them forever. But how about where you can't? Now let's not be dumb about this. We all know you can't operate while swimming, although Harvey, K3YLL did talk to me once while standing in a swimming pool. I now know one area I didn't think would be a hassle, at first. In fact it looked like a great idea. Others have done it but after my latest experience I can say no thanks.

As some of you know from conversation on the repeater, I'm a hunter as well as a ham radio operator. For those of you who might deplore my sport I wish not to argue the point here. Suffice it to say, I get more from being in wood and field than just obtaining game for the table.

The deer season in Penna. occurs after Thanksgiving. That's usually the time most of the leaves are off the trees and carpet the forest floor. If there has been some rain to soften the leaves underfoot, you can almost walk without making a sound. I call this, "pussy-footing", and spend most of my time afield hunting this way. It is rather quiet. So much so it gets un-nerving till you get used to it. We live with a constant din of noise in the cities and it takes a little time to adapt to the lack of it. After a while you get used to the quiet and learn to listen to the soft symphony of natural sounds wafting in on the breeze. Sounds that at some time long ago were important to survival. Speaking of survival; who knows where or when Murphy will strike? He is as active in the woods as he is in the ham shack; sometimes even more so. The idea of carrying a handi-talkie seemed like a great idea especially when my hunting partner John, was a ham too.

Our method of hunting is to enter the forest together and after agreeing upon a meeting place and time, we then go separate ways. Since John pussy-foots too, we cover a lot of territory and sometimes run game to each other. Many times we get very far apart and when one of us is late for our meeting it leads to some concern about the well-being of the late one. Wouldn't it be great to be in constant touch via ham radio? You'd think so and so did I - then.

We started off early one morning, each carrying our handi-talkies. I had mine suspended from a shoulder strap over my coat. The night before we had checked out the rigs on simplex and they worked fine. There was a nice secure feeling knowing we would be in constant contact should there be a need. Pausing to check my compass, I turned NE to work my way through some heavy pines and the edge of a swamp about a half mile away. John went East to a small creek with the idea of turning North to meet me along the creek at a landmark we both knew. The morning was pleasant with no frost. It would be a perfect "pussy-footing" day.

Taking a few gentle steps, then stopping to search the area carefully-then take a few more steps only to repeat the Stop-Look-Listen process over and over again is Pussy-footing.

## NEWSLETTER

-2-

How intent one can become. Every nerve is on FULL as your eyes and ears try to pick up the sights or sounds of the crafty white tailed deer. Crafty is an understatement. They, of course, have an advantage in that we are in their home ground; they know where everything is; they can detect the slightest movement or sound immediately. Sounds you think you're NOT making. As for noses- they have the best. Put this all together and you have the champ of North American game. One error on my part and away the deer goes. No waiting around to see if I'm just a guy going for a walk in the woods. Many times you don't even see the deer you spooked. A noise or a sudden movement is sometimes all it takes.

I finally come to the stand of pines dripping melting snow from their wide branches. The water drops on the leaves is the only sound I hear. So still. So quiet. My breathing sounds like a roar. Suddenly there is another sound from beyond a large pine tree. Standing absolutely still and listening as hard as I can I wait hoping to hear it again. There! Listen! Rats! Sounds like a squirrel playing in the leaves and twigs. Looking for buried nuts I suppose. They do that often around here. But no- I see movement through a small opening in the trees and it's a deer but still hidden fairly well. Can't tell if a Buck or Doe yet but by playing statue as I have been doing and if the wind doesn't shift I might have a chance. Obviously the animal doesn't know I'm here. Mouth is getting dry and I'm getting a little shaky. Must be the position I'm trying to hold, Hi. Is this how our ancestors felt long ago? The deer moves again and I can detect what appears to be a front leg pawing the ground as if clearing a space. All I can hear is my breathing and heart beat which sounds like thunder. The tension is getting unbearable. My legs begin to shake. One of us has to make a move. Forget it!

WB3EVY-K3OPC: HOW YA DOIN DICK? NOTHING HERE SO I'LL HEAD YOUR WAY SOON!!

The damned handi was loud enough to knock your socks off and before John even got my call sign finished there was a crashing sound of the deer leaping off- a flash of a white tail- then silence broken only by chatter on 2 meter FM. I could have cried but as my entire nervous system collapsed all I could do then was laugh. The joke was on me and it didn't matter. I pictured that deer telling the gang about some idiot all decked out in blaze orange yelling on a radio in the woods.

I didn't have the heart just then to tell John he was partially responsible for spooking my deer. We would have a good laugh later. It probably was a doe anyway and my license is for buck only. Sure, probably a doe looking for a place to bed down. Alone?? Most does run together. Bucks are usually the loners. Well, if it had been a buck it was probably a real small one. Yet I did see movement in the branches and now that I think of it... it was kind of high for a little deer. Could it have been from a massive set of antlers? A trophy size set of antlers? The deer of a lifetime? K3OPC, WHEN I FIND YOU I'M GOING TO BREAK YOUR NECK!!

I confess I learned a good lesson from all this. Next season I'll leave the rifle at home.

###

73

Dick WB3EVY

The ARRL NET DIRECTORY is now available. This publication lists over 1200 public service nets as well as tips on traffic handling and net operation. Requires a 9" by 12" self-addressed envelope with 88 cents postage. Send to ARRL NET DIRECTORY, 225 MAIN ST. NEWINGTON, CT 06111.