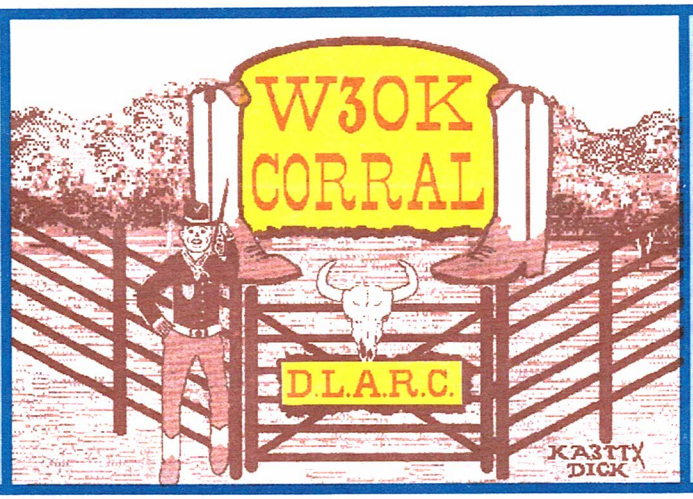
DELAWARE - LEHIGH AMATEUR RADIO CLUB, INC. W3OK

February 1994



SPECIAL SERVICE CLUB

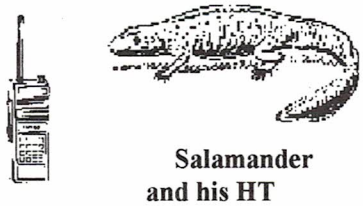
ARRL Affiliated Club

February 3rd Meeting Changed to Bethlehem VOTECH

Salamanders with HT's, No Way.....;Way !

by Rich Shevalier N3NXF

This month's program will be about how radio telemetry (commonly called radio tracking) is used in animal behavior studies. The first study I made in graduate school involved radio tracking the spotted mole salamander, **Ambystoma maculatum** to see exactly where they overwintered.



Salamander and his HT

The study involved some fairly advanced technology for the time (please keep in mind this was in 1981-2), and some fairly stout helpers for the 24 hr surveys.. I also have some data to share with you on radio telemetry (Radio Direction-Finding) work, some slides of my study, some stories to tell about some friend's studies, and some video of modern telemetry studies (on a much larger scale).

This is "fox hunting" for the real (read scientific) world. Please join me after the business meeting for a look at the interesting (and often humorous) world of Scientific Radio Telemetry.

This meeting will **NOT** be held at NCCAC, it has been moved because of scheduling difficulties to the Bethlehem Area Vocation Technical School.

Directions to the school as supplied by Dick Dech follow

Votech School Directions



Rt. 22 East or West turn South onto 191. Follow 191 for 6 tenth miles to Stop light. At Stop light turn left onto Oakland Rd. Follow Oakland Rd for 8 tenth miles to four way stop sign. At stop sign turn Right onto Hecktown Rd. Follow Hecktown Rd. for 4 tenth miles to Chester Ave. Turn Right onto Chester Avenue. Follow Chester Avenue for 1 tenth mile, you will see Votech Parking lot.

From Newburg, South on 191 to Butztown Rd. Turn left onto Butztown Rd. Follow Butztown Rd. to the four way stop sign. Stop for stop sign, proceed through stop sign. This is Hecktown Rd. you are on. From the four way stop sign you are 4 tenth mile to Votech. Turn Right onto Chester Rd. 1 Tenth mile you will see Votech parking lot.

Listen to the repeater 146.70 for talk-in.

Check your mail label

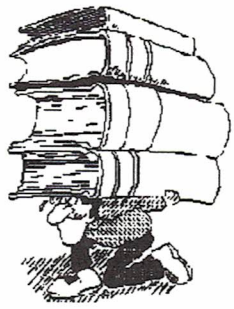
If there is a red line on it, this is it. This will be the last issue of the OK Corral you will receive and your Autodial number, if you have one, will be deleted.

Dues must be in by February 8th to stay elgible for membership. Mail your check, if due, to **Dick Dech, Treasurer, DLARC, to 120 McIlhenny Avenue, Bath, PA 18014-1614**

On that day the new directory will go to press

Just the Minutes

by Bob N3OLH, Secretary



The January meeting of the DLARC was held in KIVA Hall at the Northampton County Area Community College with about 70 members and guests present. The meeting was called to order by President Bob Green, KE3AW.

The minutes of the December meeting were approved as published in the January newsletter. The motion to approve was made by Chris, NU3L and seconded by Ray, W3TDF.

Bob, KE3AW informed the membership that because of the resignation of the Secretary, the Executive Committee, in accordance with the By-laws, had appointed Bob, N3OLH as the new Secretary.

Dick, KA3MOU gave the Treasurer's Report which reported an ending balance of $6618.01. Ray, W3TDF made a motion to accept the report and it was seconded by Marvin, KA3TEO. The motion was passed

The following new members were presented for membership:

Bill Spafford	
Jim Woof	**N3QZS**
Victor Lees	**N3OWE**
Robert Yankovich	**N3QZR**
Jeffrey Weber	**N3PDR**
Chris Kelly	**Call Pending**

A motion to accept these new members was made by Clarence, W3PYF and seconded by Vic, N3IQD. The motion was passed and we welcome these new members to our club.

Chris, announced that General Classes will begin on Monday January 17 at Gracedale. Novice Classes will begin on March 14. Anyone interested can obtain more information by calling the DLARC information line at 820-9110.

John, N3IGA reviewed the results of the Christmas City Special Event Station which was held in December. There were 25 operators who made 481 contacts with 45 of the 50 states and 190 certificates have been mailed. Special certificates were also presented to all of those who participated in the event.

Bill, K3ANS alerted members to mark their calendars for the DLARC Hamfest to be held on August 14, 1994 at CIT. Any suggestions for improving the event should be sent to Bill.

Bill introduced Dr. Terry Pundiak,N3BDC, our speaker, who will entertain and inform us on his use of computers and ham radio in marathoning. Bill also announced that Rich, N3NXF will be our next month's speaker. His topic will be Radio Tracking In The Real World.

Ray W3TDF stated that no information has be released from Nittany regarding the results of the PA QSO Party.

Clarence, W3PYF suggested that a club auction be held where members can dispose of surplus equipment and the club would benefit from a percentage of the proceeds. This suggestion will be reviewed by the Executive Committee.

Rich, N3NXF was introduced as the new publicity chairman. Rich's goal is to get the DLARC known in the Lehigh Valley, therefore, if members have any events that need publicity get the information to Rich.

Don, W3LR announced that discussions with the Bangor repeater 147.045 for linkage with W3OK are continuing. The upgrade of our UHF repeater is progressing.

Bill, K3ANS presented two events that need someone to take charge of them. A canal boat special event station to be in conjunction with the launching of the new canal boat and the the Worked all Delaware-Lehigh Amateur Radio Club Award. Members interested in either of these events should contact Bob KE3AW.

Joe, W3JD announced that he has the whole document on the issuance of vanity call signs. Any member wanting a copy should contact him.

Rich, N3NXF suggested that applicants for membership must be present to be voted upon. This was referred to the Executive Committee.

Other issues that were presented for information purposes were the proposed New Jersey RF tax and the FCC's instant license proposal.

The meeting was adjourned at 9.25 p.m.

de Bob N3OLH

February VE Session

The February VE Session will be held on <u>February 4th</u> at the Greystone Building, Nazareth beginning at 7:00 PM.

Team 2 will be in attendance.

Hazardous material safety data sheet



Element.........Woman

Symbol..........WO

Discovered by.....Adam

Atomic Weight.....Accepted as 110 Lbs

Known to vary from 100 to 550Lbs

Physical Property......1) Surface is usually covered with a painted film

2) Boils at nothing, freezes without reason

3) Melts if given special treatment

4) Bitter if used incorrectly

5) Found in various states from a virgin metal to a common ore

6) Yeilds to pressure if strategically applied

Chemical Property....1) Has a great affinity for gold silver and platinum and all precious stones

2) Absorbs great quantities of expensive substances

3) May explode spontaneously without prior warning and for no apparent reason

4) Insoluable in liquids, but activity greatly in creases when saturated with alcohol

5) Most powerful money reducing agent known to man

Common uses.. 1) Highly ornamental, especially in sports cars

2) Can be a great aid in relaxation

3) Recreational

Appearance.....1) Pure speciman turns pink when discovered in a natural state

2) Turns red, green or blue when be side a better speciman

Hazards.....1) Highly dangerous except when in ex perienced hands.

2) Illegal to posses more than one!!!

author unknown

The Prez Sez

New Faces in DLARC

by Bob, KE3AW, President



I think you will agree, we all owe a big thanks to Bill, K3ANS, as he steps down from the position of Program Chairman, for the great programs he brought to our DLARC meetings over the past six years. Each of our programs has been valuable, interesting, entertaining, and appreciated.

Greg, KB2ANG, will be our new Program Chairman, replacing Bill. I know Greg has some ideas for upcoming programs. I'm also sure Greg will appreciate hearing from members about topics they would like to hear, or specific speakers they may have in mind. Please give Greg a call whenever you have an idea for a program.

Another recent change has occurred due to the resignation of John, N3IGA, our secretary. John dedicated many hours of service to DLARC and his service is also greatly appreciated. John has been replaced as secretary by Bob, N3OLH.

Last, but not least, we have a change in our Publicity Chairman position. Rich, N3NXF, has accepted this club duty, replacing Mike, K3NWM.

When you see Bill, John, and Mike, pass on appreciation of their efforts for the club over the years, and give Greg, Bob, and Rich a hearty welcome.

Other new faces in our club include many new members. Some of them are looking for equipment. Do we have members (new or veteran) looking to buy, sell, or swap equipment? The W3OK newsletter can help make the match. If you need or have any equipment to buy, sell or swap, why not run a free "ad," or announcement in the next W3OK Corral. The W3OK Corral Editor isn't such a bad guy. If you approach him right, you'll find he's willing to help.

SCHOLARSHIPS

The Dayton Amateur Radio Association is now accepting applications for its annual $2000 scholarships. Licensed amateurs graduating from high school in 1994 are eligible. For further information and application forms, send SASE to:

DARA Scholarships 45 Cinnamon Ct. Springboro, OH 45066-1000

de Bob, KE3AW

The YL Signature - 33

YLs who are new to the bands may have wondered at the meaning of "33," which they hear YLs exchanging at the close of a contact. 33 has been used since 1940, when it was officially adopted as the YLRL's own special signature, meaning "Love sealed with friendship between one YL and another YL." Clara Reger, W8KYR, was the originator of this unique YL signature, and in 1942, Bart Pooper, W1HNE, wrote this poem about the event.

The Birth of Thirty-three

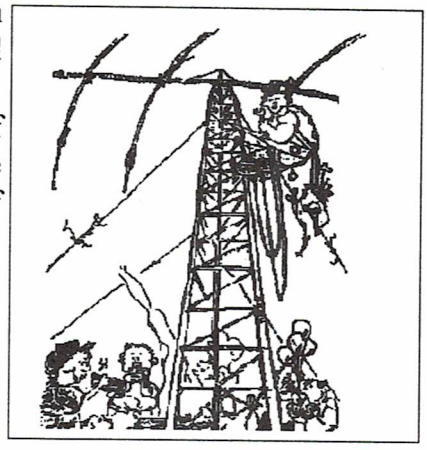
Clara had her ticket. She also had a rig. Because she was just starting It wasn't very big. She slowly tuned the crystal, And watched the meter drop. Then tapped the key a couple times To be sure it wouldn't stop. Now everything was ready. She called a short CQ And received an answer On thirty-six sixty two. They chewed the fat 'bout stuff and things, 'Bout dresses, work and dates. They finally called it QRT The girl sent eighty-eights. Clara thought it mighty funny, Whether it be Miss or Mrs. To end a perfect QSO By sending "love and kisses." It sounds too sentimental; Just a little too much "goo" To be sending "love and kisses" To a girl the same as you. For an entire week she pondered; Wouldn't even touch the rig. She pushed her slide rule by the hour, Employing "logs" and "trig." She added and subtracted. What could the answer be? To reach a happy medium, Twixt eighty-eight and seventy-three. Clara finally looked up from her work All smiles and not forlorn. Twas July in Nineteen-forty That **THIRTY-THREE** was born. There's no real definition But its meaning is known well. It's how a YL says good evening To another friend YL.

from Worldradio December, 1993

Isn't Ham Radio Wonderful?

Ethel Smith, K4LMB

You have probably heard the story about the YF who left the house without her keys and couldn't rouse her husband to let her back in. It seems Jim was working DX and he wasn't about to interrupt it to answer the door for anyone. In desperation, the YF went to a neighboring ham who knew Jim's operating habits. He succeeded in relaying a message through a ZS, telling Jim to please open his front door and let his wife back in. Ah, the miracles of Amateur Radio. (We have no record of the conversation between the YF and OM after she got back in!)



Now here is a new one from the March issue of Worldradio. The other evening a 7 was operating 20-meter mobile in Oregon. He was trying to find some small town that wasn't shown on his map and he was lost. Finally a ZL came on the frequency and suggested he might help (from New Zealand!!) The ZL explained that he had a very detailed map of the area in Oregon and proceeded to furnish the necessary directions to the mobile station to take him directly to his destination.

from the March '93 Foundation for Amateur Radio "Auto-Call"_Ethel Smith, K4LMB, Editor

Vanity callsigns to return?

For a while, several decades ago, it was possible for Extras to choose their callsigns for a fee. However after some hanky-panky was exposed, there was a scandal, the system was discontinued, and we've all had to accept the computer's sequential choice for our calls. This has driven some hams nuts; in turn they've driven the FCC nuts with "Why can't I have Daddy's old callsign?" complaints , irate letters to Congressmen, etc.

A new computer system coming on line in Gettysburg will have the ability to provide callsign selection, as well as club and military recreation station callsigns. The FCC now wants to know what hams think about instituting a system of vanity callsigns for a fee. The details of the proposal will be published in the major ham media. Please don't make up your mind until you have read the proposal -- don't rely on rumors.

At the same time, the FCC dropped plans to have private-sector organizations issue club and military recreation station calls.

from REMARC, publication of the Mid-Atlantic Amateur Radio Club, WT3P Editor.

IMA LIDD

Ground mounted 1/4 wave Vertical Antennas

By Van, K3CP

Ima Lidd wants to put up a ground mounted quarter wave antenna for 20 meters. He had picked up some information listening on the bands, but he thought he would do some reading and consult with his Elmer before proceeding. He had read ads for verticals claiming that no radials were required. His Elmer told him to read about the efficiency of verticals and then decide for himself whether or not radials were needed.



Ima went to the book and began to read about vertical antennas. He really opened his eyes when he read that the efficiency of verticals was less than 100 percent. But when he stopped and thought about it, he realized that this was true because he never heard of a quarter wave vertical having any gain. What really surprised him was that the efficiency could be as low as 20 percent with three six foot ground rods. This means that if his transmitter puts out 100 watts to the antenna system, he is losing 80 watts. Where, he wondered are the 80 watts going?

Reading the book he learned that they were being lost in the earth. The 1/4 wave antenna relies on the ground for the other quarter wave and the RF actually flows through the ground with the current concentrated near the base of the antenna. He found the formula for calculating the efficiency of his vertical antenna. It stated simply that the efficiency was equal to (R rad) divided by the (R ant) plus (R gnd) plus (R rad) where

(R rad) = Radiation resistance of antenna.

(R ant) = D. C. Resistance of antenna and feed line.

(R gnd) = Resistance of the earth.

The formula looks like this:

$$\text{Efficiency} = \frac{\text{(R rad)}}{\text{(R ant)} + \text{(R gnd)} + \text{(R rad)}}$$

Example calculations -

First case:- 3 six foot ground rods at base

R rad = 36 ohms. (Half that of a 1/2 wave.)
R ant = 1 ohm.(Feed line, connectors and antenna.)
R gnd = 100 ohms.(IR losses in the earth.)

Solving the formula we get an efficiency of .26 or 26 percent which means 100 watts to the antenna, 26 watts radiated and 74 watts IR losses in the earth and the antenna system.

Second case:- Added 6 radials to system

The R rad and R ant remain the same but the R gnd comes down to approximately 40 ohms.

Solving the formula now yields 47 percent. Now we are radiating 53 watts. Still not great but twice as much as before. It would take 120 radials to get the ground losses down to around 5 ohms. This would result in an efficiency of 85 percent or so. These figures are fairly typical of our type of earth. Variations will occur for different locations. Remember these values represent a quarter wave ground mounted vertical antenna. Although many radials result in higher efficiency there is one disadvantage. The Q of the antenna gets better and better as radials are added (a good thing), but the band width is reduced. But them a dummy load has a very nice band width.

The purpose of the radials is to reduce ground losses. In the absence of radials, antenna currents flow through the earth. Ima now knew that the best place for radials would be above the ground because the more current they intercepted the less that would get to earth. A good installation would find the radials at about 10 feet off the ground. The next best place would be on the surface. Burying them in the ground would be the least desirable place as the currents would then have to go through the ground to get to them.

Ima Lidd now knew what his Elmer meant when he told Ima to do the efficiency calculations and then make up his mind whether or not his vertical antenna would need a radial system. He remembered hearing someone saying that a vertical antenna radiates equally poorly in all directions. He asked Elmer why use a vertical at all. Elmer told him that they have a lower angle of radiation which helps work dx on certain paths and that they don't take up much real estate.

de Van, K3CP

** CONTEST CALENDAR **

by Barry, KU3X, Contest Editor

Feb 5-7 North American Sprint,
CW Vermont QSO Party

Feb 6-7 1994 Classic Radio Exchange

Feb 12 QCWA CW QSO Party

Feb 12-14 EA RTTY Contest
New Hampshire QSO Party
North American Sprint
YL-OM Contest, phone

Feb 13 W1AW Qualifying Run 10-40 WPM

Feb 14-18 School Club Roundup

Feb 19-20 ARRL DX CW Contest

Feb 22 W1AW Qualifying Run 10-35 WPM

Feb 25-27 CQ WW 160 Meter SSB Contest

Feb 26-27 U.B.A. Belgian CW Contest
RSGB 7 Mhz Contest, CW
REF French Contest, Phone
YL-OM Contest, CW

CONTEST TIP #21

RIT-XIT: If you are trying to work a CW station and he is working split frequency, here is how to utilize your RIT-XIT.

Let's assume he is transmitting on 14.024 MHz and he is listening up 3 KHz. Let your VFO on 14.024 and turn on your RIT.

Listen up about 3 KHz or until you hear the station that just worked him. Now turn off your RIT and turn on your XIT. You're ready to transmit. The station you are trying to work may be listening up and down the band a few kilohertz. If so, turn your RIT back on and see which way he is listening and lead that frequency by about 700 to 900 cycles.

de Barry KU3X

ARES, RACES, DLARC NETS MEET
SUNDAYS @ 900 & WEDNESDAYS @ 1900 .
MAKE IT A HABIT

About Electricity

by Keith Waterhouse

(a British novelist)

Most electricity is manufactured in power stations, where it is fed into wires that are then wound around large drums. Some electricity, however, does not need to go along wires:that used in lightning, for example, and in portable radios. This kind of electricity is not generated, but is lying about in the air, loose.

Electricity makes a low, humming noise. This noise may be pitched at different levels for use in doorbells, telephones, and electric organs.

Electricity has to be grounded. That is to say, it has to be connected to the ground before it can function, except in the case of airplanes which have separate arrangements. Although electricity does not leak out of an empty light socket, that light socket is nevertheless live if you happen to shove your finger in it when the switch is on. So, if it is not leaking, what is it doing?

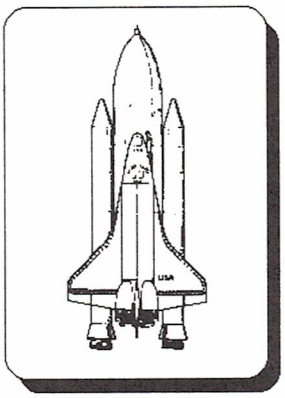
Electricity is made up of two ingredients, negative and positive. Each ingredient travels along a wire covered with black plastic. When the two wires meet in what we call a plug, the ingredients are mixed together to form electricity. Electricity can be stored in batteries. Big batteries do not necessarily hold more electricity than small batteries. In big batteries the electricity is just shoveled in, while in small batteries it is packed flat. Incurious people are content to take all this for granted. They press a switch and the light comes on_and that is all they know about the miracle in their homes. This has never been enough for me; I have to know how things work. If I cannot find out from some technical handbook, then I combine such information as I already have with simple logic.

Thus it is easy to deduce that the light switch controls a small clamp or vice that grips the wire hard, so the electricity cannot get through. When the switch is turned on, the vise relaxes its grip and the electricity travels to the light bulb where a bit of wire, called the element, is left bare. Here, for the first time, we can actually see the electricity, in the form of a spark. This spark is enlarged many hundreds of times by the curved magnifying-glass shape of the bulb.

from the March 1989 IEEE Grid, San Francisco Bay Area Council edition, in which it was reprinted from the January 1989 issue of The Toledo IEEE News, Russ Kinner, editor

Sarex to fly again in late January

The first SAREX flight of 1994 is currently slated for liftoff on January 27th. Several members of the six man crew are currently studying to take their license examinations



. One of those scheduled to fly is Mission Specialist Sergi Kirkalev. Kirkalev is a veteran of the Russian Mir space station who has swapped his U5MIR call sign for a more traditional call of UZ3AK.

Four schools in the United States and one in Russia have scheduled contacts with the ham radio crew that will be flying STS-60.

Growth in ham radio may not be as great as expected

Growth in Amateur Radio may not be anywhere near as great as the numbers currently show. This is because there have been few names purged from the FCC's database in over a decade, and there is really no way right now to know the total number of hams who are alive and taking an active part in the hobby.

But come January of 1994 some real idea of just how many hams there are will begin to show up. This, as the first of the ten year ham licenses begin to expire and we see just how many hams renew. By way of background, all licenses issued or renewed during the period of January 1984 to December 1988 were ten year term tickets. As a result there were relatively few renewals filed from January 1989 to the end of this year. There were also no renewals made to existing five year licenses after 1989. All licenses issued from January 1984 to December of 1988 were simply given a bonus of a five year extension. So, the big question for 1994 is what is the real number of living, licensed and active hams.

Some insight may come from figures compiled by Fred Maia of the W5YI VEC. Fred figures that at least 4,400 renewal applications should arrive at the FCC's Gettysburg, Pennsylvania post box in January. Most trend watchers expect the number to be around half of that and believe that a downward trend will continue as the inactive and deceased hams are weeded out of the FCC database.

The Commission says that it is planning to introduce a new and simple mail-back renewal card. In fact the commission had planned to introduce the card in January, but it now does not look it will be available until later in the year. The theory is that anyone who does not renew using such an easy system is either no longer among the living or has decided to drop out of ham radio, permanently.

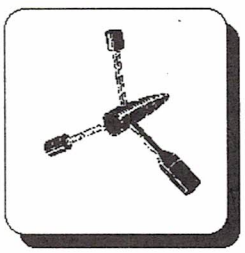
Sometime in March the numbers for January and February should be announced. As soon as they are, we will bring them to you so that we can all know whether the trend is up or down.

from Amateur Radio Newsline

Repeater in the sky!

by Clem, NR3U

AMSAT OSCAR 21 can be a lot of fun! With the interest in MIR locally, and using the new dual band transceiver, assuming you got one for Christmas, just listen on 145.985 FM and transmit on 435.016 FM. This satellite does a great job.



There are 6 passes each day above us: three passes between 8 PM and midnight, then three from 10AM to 2PM. each pass wil last about 15 minutes. Have a friend create a schedule for based on NASA Keplerian Elements or purchse the software from AMSAT and create your own schedule. That way you will know exactly when AO21 will appear and from what direction.

Keplerian elements for satellites are available on the W3PYF and N3IQD packet BBS's. If you want to get on the birds, a good move is to join AMSAT. For Information, write AMSAT, 850 Sligo Aveenue, Silver Spring, MD 20910.

For Further information, Clem, NR3U operates a packet/satellite gateway station in upstate Pennsylvania. Inquireies can be sent to him by addressing a packet message to NR3U @ NR3U.PA.USA.NA

FOR SALE

MFJ - 986 - 3KW Tuner.....$ 175.00
Heathkit SB-1000 Linear..... $ 585.00
Yaesu FT-23R HT 2 meter .....$ 175.00

Call Bob Nail, N3HWN @ 826-5509

Join or Renew your membership in ARRL by sending your application toDick Dech Treasurer DLARC BENEFITS FROM THIS

FCC Warning to Uncoordinated Repeater

The Los Angeles FCC office has sided with a small but vocal group of simplex operators who claim that they are suffering interference from an uncoordinated repeater.

In a warning letter dated September 10th to Miguel A. Ramirez, who the FCC views as the legal license holder of the NH2R repeater, Engineer-in-Charge James R. Zoulek noted that his office continues to receive complaints regarding Ramirez' "noncoordinated operation on several amateur frequencies.. "

The letter goes on to say that it has come to Zoulek's attention that the NH2R repeater "may be operating a non-coordinated repeater on 147.49 MHz," noting that the operation of a non-coordinated repeater must not cause interference to other radio amateurs as specified under Section 97.205(c) of the Amateur Radio Service rules. The Zoulek note also warned Ramirez that: "...failure to adhere to FCC regulations may result in the revocation of your amateur license." Engineer Zoulek's letter to Ramirez gave him fifteen days from receipt of the letter to respond to the allegations and to advise the Commission of the corrective measures taken to resolve the matter.

The primary complaint against the predominantly Spanish language repeater was brought by a group of simplex users who have for years congregated on 147.48 MHz. Many of them are part of the old 146.76 simplex operation, known better as the ".76ers." This is the same group generally credited with establishing FM communications on the two meter band. At one time in the mid 1960s the .76ers were politically powerful enough to control the day-to-day operation of FM users in nine western states and northern Florida.

As far as Westlink Report can determine, this is the first time in well over a decade that the FCC has seen fit to directly intervene in an alleged interference issue between a repeater and a group of simplex operators. More important, it is probably the first time ever that an uncoordinated repeater has been told by the FCC that it does not have the same right to exist as do systems that have gone through the coordination process and have been given sanction by the local ham radio community to operate. This action would also seem to indicate that the old "Seven Six Secret Service" power base that has for so long remained dormant, is still in place.

from The Westlink Report Chris. KD3OA ARRL EPA Bulletin Manager

Join the ARRL, it is not just a Magazine Subscription

License Renewals to Begin Again in 1994

Have you looked at the expiration date on your FCC license lately? Five years ago the term of an FCC amateur license went from five years to 10. So, for the last five years no licenses have expired. Licenses are now beginning to expire again, which means that it may be time for you to renew.

It's a good idea to renew at least 60 days before the expiration date on your current license. Use an FCC Form 610, available from ARRL Headquarters. If you submit a timely renewal application, you may continue to operate even if the FCC doesn't act on the application by the expiration date. If your renewal is late, you must stop operating until your new license arrives.

Licenses that have expired for more that two years may not be renewed, which means you lose your call sign and will have to take the exam again. Don't take a chance - check your license expiration date now!

The preceding from The ARRL Letter. 73 Chris, KD3OA ARRL EPA Bulletin Manager

Heart Warming Ham

by William Spafford

As a future Ham, I was scanning the frequencies when I came upon an interesting QSO. I continued to eavesdrop and I'm glad that I did. It was 12/24/93, early in the day,



and I listened as two hams were speaking about setting up third party communications between a Doctor in Florida and a Doctor in San Salvador. So I continued to eavesdrop. The reason behind this QSO was not, what I would consider anyway, a normal reason. The object of the QSO was an 8 year old girl in San Salvador who had a rare heart condition and needed a heart transplant. The very heartwarming ending of this QSO was that arrangements were made, free of charge, for this little girl to come to the USA, for her heart transplant. All of this was set up and arranged over the air waves by two amateur operators from two different countries. And people wonder why others want to become "hams".

William Spafford father of N3LAI

editors note *Bill Spafford is studying for his license and by the time this appears, will I am sure already have his license.*

How to do it!

by JP, N3GWR

To Editor, Clarence:

Recently, I saw the following question on a bulletin board and I answered it. I'm sending you a copy, just in you need filler for the newsletter. It's pretty low-tech, but maybe some of our newer hams could appreciate it. Tnx J.P.

Msg #2294 From: WD3Q Date: 3-Jan 1606Z
Subj: Getting Cables Inside If the weather ever gets nice, I'll be doing some long-needed antenna work. Where I need help is getting the cables into the house. How do I go through a double brick wall (inner and outer walls with a gap in between)? Or do I replace a pane in t he hinged window? Any/all suggestions are appreciated!

73 Eric WD3Q@KE3Q

Msg #2504 From: N3GWR Date: 4-Jan 1514Z
Subj: Re: Getting Cables Inside I suggest you see what the utility companies have done. Frequently you'll find that the electric company goes right thru the brick - this is often done while the house is co nstructed. I had a conduit put in while building for this purpose. If they are working on an older home, the phone and cable companies usually drill a hole in the sill of a w indow, and if you go to the hardware store, you may find a 1/4" drill bit that is one f oot long which they use.

The only problem is that as a ham you will likely rearrange the wires periodically. That's when you might consider replacing a pane of glass with either Plexiglass or a metal plate. Both are easy to drill and then mount feedthru or bulk head connectors. Although the Plexiglass will let in light, the metal sheet could be grounded, and would make a convenient "quick-disconnect" point for lightning protection. Those are a few suggestions, Good Luck with your project.

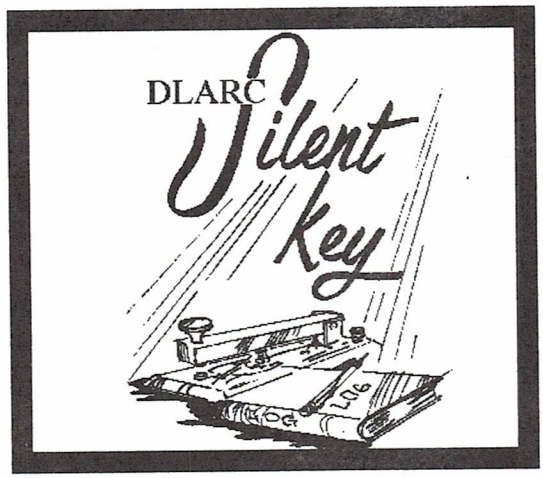
73 J.P. N3GWR

For Sale

Kenwood TS830S
Kenwood MC80 Microphone
Kenwood Antenna Tuner AT230
Kenwood Speaker

Full Price entire lot $700. 00 Call Jack WB3BAO at 215 253-0555

Kenwood TH45AT 440 HT with three battery packs, DC adapter, two battery chargers, and vinyl soft case. Still in original shpping carton. $225.00. Call Jim, N3EYJ at 215 559-8123.



K3KCU

Albert E. Cowell

Al Cowell, of Easton became a Silent Key on January 8th. Al, a long time member of the DLARC was a personnel director of the former Nazareth Cement Co, now know as ESSROC. For 37 years before retiring in 1970. In the 30's he owned a radio shop on South 12th St in Easton.

His son, Bruce, K3BKR, of Saylorsburg, is also a member of DLARC. In addition to his wife, Fae, he also has a daughter Pamela, five grandchildren and one great-grandson.

TREASURES FOR A YOUNG HAM

Dennit Golden, KA3APO, is offering a collection of resistors, capacitors, diodes, transformers, tubes, sockets, plugs, etc. to any young and aspiring new ham who is enthusiastic about experimenting or building projects.

Any young ham interested in the offer can contact KA3APO directly, or through any executive committee member listed on the cover sheet of the W3OK Corral.

Thanks to Dennit for his generosity. He calls this collection "Junque," but it may be some young ham's treasure, and the start of a fascinating hobby, as such collections have been for many of us.

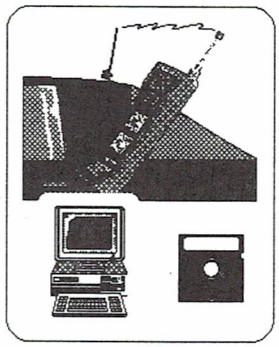
de Bob, KE3AW

For Sale

Kenwood TS-820 with 500 hz CW filter, 12DC converter builit in. Remote VFO (VFO-820) Operators and Service Manual Operators & Service Manual..Additonal set of tubes, 12BY7 & 6146's (new) . Leave Mail for W3LR@W3PYF or call Don Curtis, W3LR @ 610-282-2637.

A New World of Communications

By Joe, W3JD



When I began teaching at Kutztown University seven years ago, I made a point of telling my students that the "telecommunications" in the name of our department meant the electronic mass media of radio, TV, and cable--not the wired data and personal voice communications of telephone service. I don't make that distinction anymore, because things have changed. We're all aware of the proposed merger between two giants--and former adversaries--in the communications industry, Bell Atlantic and TCI (the largest cable operator in the country), and there are a host of other similar deals in the works.

The dividing line between mass media and personal communications are all but gone. Telephone companies are starting to provide full-motion video even on a twisted pair, with fiber optics offering immensely greater potential for video-on-demand. At the same time, cable companies are getting ready to link their customers for conversations--just like the telephone companies. Messages on computer bulletin boards (amateur radio packet boards included) have larger "audiences" than some radio and television stations.

We hear of an imminent "500-channel universe" --a phrase that has come to symbolize a fundamental change in the delivery of television programs, either by direct broadcast satellites (DBS) or by fiber optic systems. (What are they going to put on all those channels?) And Vice President Al Gore has recently pledged the administration's commitment to establishing an "information superhighway" with the same kind of access as that offered by universal telephone service today.

What does all this have to do with amateur radio? Plenty. The kind of wide-spread personal communication that used to be available only to hams is now common to anyone with a computer and a modem. Computers alone can also satisfy the technical inclinations of young people who, in the past, might have investigated amateur radio. Of course, packet radio has done much to appeal to those captured by the possibilities offered by computer technology, but we all know that ham radio is more than simply a wireless version of a computer bulletin board.

Mobile communications capability, traditionally another attractive aspect of amateur radio, is now available to virtually anyone with cellular telephones. Still to come are the expanded possibilities of a personal communications service (PCS), which the new FCC chairman Reed Hundt has already mentioned as a priority for the attention of the Commission--especially in relation to the auctioning of radio spectrum space for PCS. Amateur frequencies aren't currently in jeopardy, but, if other services are displaced by PCS, a ripple effect might make underutilized portions of amateur frequency allocations ripe for the picking. Here, too, amateur radio has more to offer than the mobile convenience of either cellular telephones or PCS, especially in the realm of public service communications.

Because of the convergence of a number of technologies, the general population now has access to communications systems with many of the advantages that have been enjoyed for years only by hams. It would serve us well to pay close attention to the progress of these new developments, if only to be aware of what continues to be unique about ham radio.

de Joe, W3JD

SEASON'S GREETINGS FROM THE CHRISTMAS CITIES: W3OK SPECIAL EVENT 1993:

Twenty four DLARC member operated W3OK during the weekend of December 18 - 19. The station was on the air as a special event station 24 hours from our twin Christmas cities of Nazareth and Bethlehem. Nearly 500 contacts were logged with hams in 45 states in the USA, Spain, Great Britain, Canada, and Bermuda.

According to the log, the following persons operated the station: George, N3OWG; Glen, K3MGP; Bud, WA3BOM; Chris, KE3KN and dad, Joe, WV3M; Rick, N3MHW; Dan, KA3ZAT; Joe, W3JD; Rich, N3NXF; Andy, N3NLA; Dave, N3JGX; Bob, KE3AW; Dick, KA3MOU; Elaine, N3ODB; Chuck, N3LAI; Jeff, N3QZT; Jim, WA2ZGO; Bob, N2OTI; Carl, N3NGL; Bill, KA3RBH; Ken, N3IYX; Beorn, WU3M, Cary, KA3NGW, and Brad, KA1RAH. Apologies to anyone missed. Please bring any corrections to my attention! Additionally, all members and guests were welcome to visit the station, and many members stopped by to say "Hi" and have a cup of coffee and some cookies and cakes.

All persons who operated at the station during this year's special event will receive Certificate of Participation, personalized by John, N3IGA. John has been putting in long hours also completing the Special Event Certificates for those who QSL for this event.

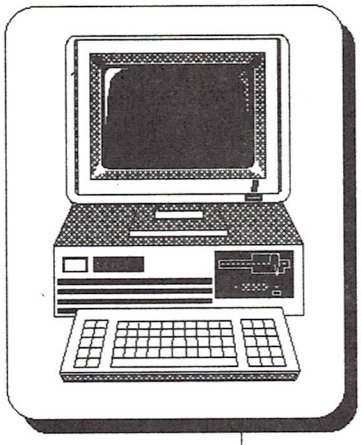
As for the cakes and cookies, thanks to those folks who added that extra touch to the activity.

de Bob, KE3AW

Digital Communication

by Joel, K9TBD

The Pentium Processor



During a visit to the Washinton D.C. area during the holidays, I had the opportunity to view one of the first Pentium PC's at a large computer shopping center. It was impressive regarding the speed with which it performs current software such as windows and mathematics intensive programs. It almost answers the questions before you ask them! Also while in D.C. a good friend who works for Intel (the manufacturer of the Pentium) provided me with a Technical Overview bulletin. This article is an extract of that literature.

For simplicity in comparing processors across Intel's line, Intel has come up with a rating system called iCOMP which takes into account four aspects of performance: integer, floating-point, graphics, and video performance. The comparison table follows as (Processor name - clock speed, iCOMP rating) => (Pentium 66, 567) (Pentium 60, 510) (i486 DX2-66, 297) (i486 DX-50, 249) (i486 DX2-50, 231) (i486 DX-33, 166) (i486 SX-33, 136) (i486 DX-25, 122) (i486 SX-25, 100) (i486 SX-20, 78) (i386 DX-33, 68) (i386 SX-33, 56) (i386 DX-25, 49) (i386 SL-25, 41) (i386 SX-25, 39) and (i386 SX-20, 32). DX means a math-coprocessor.

The comparison with other high performance architectures: (Processor, SPECint92 rating) => (Dec Alpha-133, 66.3) (Pentium-66, 64.5) (Pentium-60, 58.3) (MIPS R4000-50/100, 58.3) (SUN Super-SPARC-40, 53.2) (HP PA-RISC 1.1-66, 51.1) (IBM RS4132-41.7, 34.6) (HP PA-RISC 1.1-50, 32.8) (i486 DX2-66, 32.2) and (SUN micro-SPARC-50, 26.4). In other words, the Pentium has twice the performance as the prior generation high end microprocessor by Intel.

The way in which the performance has been enhanced utilizes most of current speedup techniques used in the fastest processors available today. The prior processor (i486) had 1.2 million transistors. The Pentium has 3.1 million transistors. The internal bus has been widened from 32 to 64 bits. Dual caches (one for code and a separate one for data are on chip. The caches use a modified write back algorithm which minimized memory bottlenecks. A cache is a bunch of high speed memory buffering lower speed memory to the processor such that if the information is in the high speed cache there is no requirement to go directly to slower main memory. The instructions are dual pipelined allowing execution of two instructions simultaneously. The pipeline for an integer instruction is in five stages so that up to 5 instructions can be executing separate stages simultaneously thus many instructions may be executed in one clock cycle. Prior processors required multiple clock cycles to execute a single instruction. The on chip floating point processor has common instructions hardwired as opposed to microcode thus enhancing these operations. In addition, the Pentium has branch prediction the first for a microprocessor.

The Pentium design also supports multiprocessing and allows running of all the advanced operating systems such as UNIX, Windows-NT, OS/2, Solaris, and NEXT step.

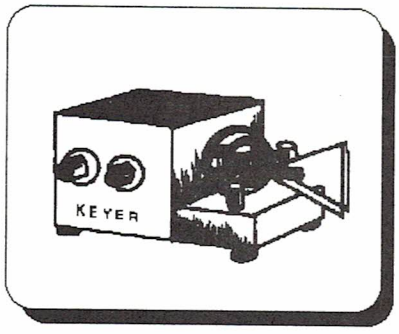
What does this mean for the end user? This processor will greatly speed up current applications, but this is only a short term benefit. This sort of technology finally has taken the microprocessor out of the stone ages and will allow a machine on your desk top the performance of mainframes occupying racks and rooms full of equipment. I certainly can not predict what software developers will do with this sort of speed and architecture other than observing that whatever power is available in any processor will be exhausted in just a few years time.

This technology already has outstripped the performance of one year old high end RISC workstations. This is only one processor by one vendor. Competition and marketing strategies will see many more such devices by a variety of vendors appearing in the very near future. These are exciting times. Processors are humming along nearly as fast as mother nature will allow. The next wave will be the integration of hundreds and thousands of such processors into massively parallel computer system in order to attach the really tough problems such as weather prediction, human genome mapping, finite element analysis, and others.

de Joel, K9TBD

British Hams Oppose Code Free Licenses with HF Privileges

from the ARRL Letter



* British Amateurs are opposed to a code-free amateur license with HF privileges, an informal survey has shown. The current U.K. Class B license, with privileges only on 50 MHz and above, is code-free; the Class A (HF) license requires a 12 wpm Morse Code exam. In 1992 the British Radiocommunications Agency asked the Radio Society of Great Britain to conduct a "consultation exercise," a survey. Through articles in its journal, Radio Communications, and other British Amateur Radio publications, readers were asked to express their opinion on the subject. Out of 60,000 U.K. licensed amateurs, 1,413 responded, including 86 from "overseas". By a 2 to 1 margin the respondents opposed a code-free HF license.

The RSGB said that with the world-wide amateur community expanding at some 7 percent per year, some method is needed to restrict access to the HF bands, which already are very crowded and unlikely to expand. It said that if the current method of restriction, CW, were eliminated, some other "filer" should be found. "It is the way in which numbers are limited to avoid intolerable levels of interference that is being questioned," the RSGB said.

The RSGB said that "it is primarily up to the amateur community world-wide, and its elected representatives, to determine what qualifications are necessary and what standards need to be met to gain different types of transmitter license." Current International Telecommunication Union regulations requiring a Morse exam for an HF amateur license would have to be changed, through a petition process from individual countries, the article said, although it also noted that Japan has a code-free license that allows limited amateur privileges below 30 MHz (10 watts output and excluding 20 and 17 meters--ed).

The RSGB noted that Region 1 of the International Amateur Radio Union as recently as September had voted to support keeping a Morse code requirement for HF licenses. The RSGB said it currently agrees with that opinion "but recognizes that the situation may change in the next 5 - 10 years."

Thanx to KL7Q

Ham Radio Horizons Named as Finalist in Video Competition

from Amateur Radio Newsline

Emmy winning TV Producer Rich Moseson, NW2L, who spoke at the meeting of the Delaware Lehigh Amateur Radio Club, during the past year, may be on his way to another major award. This, with word that his video titled "Ham Radio Horizons" produced for CQ Communications Inc, has been named as a finalist in the New Fork Festivals International Non Broadcast Media Competition for 1993. Moseson's "Ham Radio Horizons" is designed to bring the world of ham radio to life for hams and non hams alike. It was chosen form a field of almost fourteen hundred entries in the competitions non-broadcast categories.



Winners of the festival's Gold, Silver and Bronze medals will be announced in January 1994. If "Ham Radio Horizons" takes the gold, it will be the second time that a video presentation dealing with Amateur Radio will have attained this honor. In 1987 the ARRL produced "The New World of Amateur Radio" received this highly coveted award. The Gold Medal is been on display at ARRL Headquarters in Newington Connecticut. Ironically, Moseson served as one of the Field Producers on "The New World of Amateur Radio."



I just bought a new Amplifier and hid it in the closet. If my WIFE finds out about it, the sky will come crashing down

For Sale

Kenwood TH25AT 2 meter Handheld, PL installed. 2 - 2.5 Watt Packs and 1-5 Watt Pack. BC11 Rapid Charger... Call Hank, NX3R @ 215 252-3387
Price : $235.00.

The Odd Phrase

by Roger Barber N9CQQ

Through the years, I have collected comments from foreign operators where something was misconstrued, or lost in the translation.. Thought these might bring a chuckle.

* In the meantime, I work and do nothing.

* My antenna is 15 meters up to the ground.

*Your frequency is a little off, come a little down.

* I must QRT because now comes thunderlight.

* Once again, I can spell my name.

* I can't listen to you , can you listen to me?

* My English is no good, but don't worry about it.

* What state is your state in?

* I thank you for the nice short talking.

* The rig is made home.

* The blond woman for some reason was middle aged.

* His daughter is married at the moment, she is normally married in England.

* Much of the river is out of the rivers.

* I was built in 1920, when were you built?

* I hope to talk to you in the next future.

Something to Think About

If men had no faith in each other, we would have to pay cash for everything!



Remember -- you're never too old to learn something foolish!

A new aspirin is now being sold in half-tablets -- it's for people with splitting headaches.

Then there was the bicyclist who got off his bike when he saw the sign "No Peddlers Allowed".

It's better to give than to receive -- besides it's deductible.

Work is the curse of the drinking class.

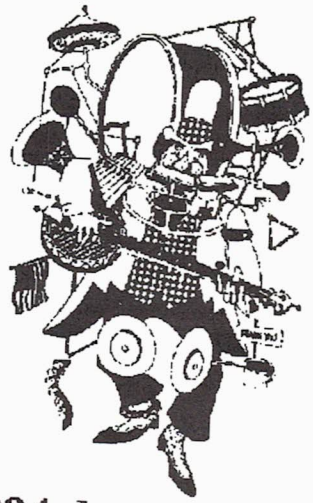
Women are to blame for most of the lying men do...they insist upon asking questions.

A good listener is usually thinking about something else.

If you look like your passport picture then you need the trip!

Thrift is a wonderful thing...and who among us has not wished that his ancestors had practiced more of it!

Was There a Red Line on Your Mail Label?



1994 dues are due!

If it is, your dues are due. The Directory of members and mailing of the **OK Corral** will be stopped if you have not paid your dues by **February 3rd.** Still only **$12.00** for members and **$3.00** for members of the same family at the same address. All Autodial numbers will be deleted on that date for those who have not paid.

Mail your check, made out to DLARC to treasurer Dick Dech, KA3MOU, 120 McIlhaney Ave, Bath, PA 18014-1614.



All Amateur Radio Operators are invited to
Participate to the DLARC, RACES & ARES nets
on 146.70 W3OK/RPT with an alternate of W3PYF/RPT 145.11
W3OK trustee Rick Saeger, K3OO
The Nets are held on Sundays at 9:30 AM and Wednesdays at 7:00PM

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DLARC INFORMATION LINE 820-9110

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==1993-1994==

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--CLUB MEETINGS

All regular meetings of the D.L.A.R.C. are held on the first Thursday of each month at 7:30 PM at Northampton County Community College
TALK IN ON 146.70
Any comments or articles contributed to
this newsletter should be addressed to
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