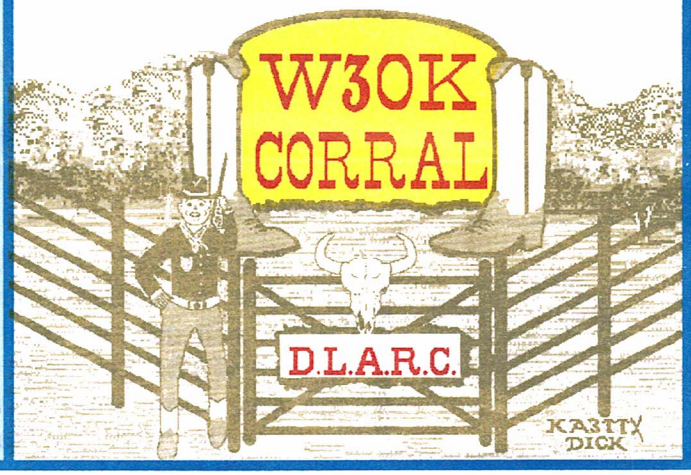
DELAWARE-LEHIGH AMATEUR RADIO CLUB, INC. W3OK

April 1994



SPECIAL SERVICE CLUB

ARRL Affiliated Club

ARE YOU AC OR DC?

Can you keep operating when the lights go out?

by Greg, KB2ANG, Program Chairman

No, no, it's not what you think. April's program will be on powering your shack on batteries or DC.

What you can do to stay on the air when MET-ED or PP&L just disappear in the middle of a storm or some other trick that mother nature or man plays on your utility power.

The speaker will be KB2ANG, yes, me. I work with inverters, rectifiers and all types of batteries every day. My home station; radios and computer normally run on house current but I have a noise-free back-up of an inverter and batteries or I just run what I can right off 12 volts that is a great way of getting rid of 60hz hum on both receive and transmit.

I'll be bring by some of the "tricks of the trade" and literature; so if you want to stay on the air when the lights go out come and see how I do it.

It will be back to KIVA Hall at NCCAC for this meeting on April 7 beginning at 7:30 PM.

ARES/RACES AWARDS:

To the following for their work in the Snow storms of February and March:

KA1RAH, KD3SQ, KA3JWE, N3IGA, and **N3IYX**. For services to Easton Hospital in transporting nurses.

The Storms of 1994 and how we helped

by Clarence, W3PYF,
EC –RO Northampton Cty

SPECIAL SERVICE CLUB

Plan and it paid off. At the request of Nick Tylenda, Northampton County Coordinator of Emergency Management, asked following the Blizzard of 1993 that I gather a list of amateurs who had four wheel drive vehicles and would help in case of emergency.

The list was gathered and when the snows of February and March hit, the Delaware-Lehigh Amateur Radio club was ready.

Five members of our club went to the aid of the Easton Hospital in bringing Nurses and Laboratory help to the hospital. In all, on the two times needed, a total of 12 hospital personnel were delivered to their jobs, some as early as 7:00 AM. And others as late as 11:00PM.

Inside you will see the letter I received from the President & CEO of Easton Hospital.

It shows why, DLARC is a Special Service Club.

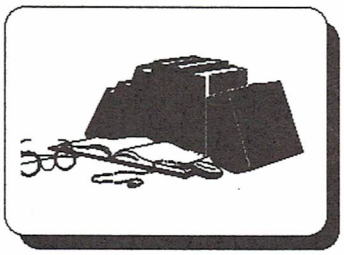
Once again, our drills and tests paid off.

de Clarence, W3PYF

Just the minutes

by Bob, N3OLH, Secretary

The March meeting of the Delaware-Lehigh Amateur Radio Club was called to order at 7:40 PM on March 10, 1994 at the Bethlehem Area Vo-Tech High School by the Club's President, Bob Green, KE3AW. There were 48 members and guests in attendance.



Bob informed the membership that the February minutes as published in the March newsletter were in error in respect to the amount approved to be donated to a deserving California amateur radio club. The correct amount should have been $200. J.P., N3GWR, made a motion to approve the minutes of the February meeting as printed in the March newsletter, subject to the above correction. The motion was seconded by John, N3DSP, and passed by the membership. Bob said that we are still waiting for responses from various people in California in order to select a deserving club to receive the award.

Dick, KA3MOU, presented the Treasurer's Report which showed a balance in the Club treasury of $6,017.31. Jim, N3QZS, moved that the Treasurer's Report be accepted as read. The motion was seconded by John, N3IGA, and was approved by the membership. Dick also showed the new Club patches which are available from him for $2.50.

Jeffrey Fehr, call pending; Stephen Finelli, N3NNG: Harold Rausch, W3AHP and William Semler, N3RLR, submitted applications for membership. A motion to accept these new members was made by Clarence, W3PYF, and seconded by Chuck, KD3SQ. The motion was passed and the new members were welcomed into the Club.

George, N3OWG, reviewed the rules of the new D.L.A.R.C. Club 50 Award. The complete rules will be published in the May newsletter.

Clarence, W3PYF, presented **Dick, KA3MOU,** with a certificate from ARRL recognizing him as Assistant Emergency Coordinator. In addition Dick's station has been designated as an Official Emergency Station. Clarence also presented ARRL certificates of merit for outstanding service during severe weather to **Chuck, KD3SQ; Ken, N3IYX** and **John, N3IGA.** Certificates for **Brad, KA1RAH** and **Don Reamer, KA3JWE** will be presented at a future time. In connection with their outstanding service, Clarence read a letter of thanks from the President and CEO of the Easton Hospital.

Bob, KE3AW reminded the members that each member is entitled to one free membership badge which will only be issued upon their request. A charge of $2.00 is made for any additional badges. He also encouraged members to submit nominations to the ARRL for Ham Of the Year and for the Grand Old Ham Award.

Bill, K3ANS, asked members to begin distributing Hamfest fliers around the Valley, The Hamfest committee is also looking for a volunteer to head up a new committee to handle Hamfest mailings.

Volunteer are still needed for D.L.A.R.C. participation in the Nazareth Technology Awareness Expo. to be held on March 26. Please contact Bob, KE3EW or Clarence, W3PYF if you can help.

Greg, KB2ANG, the program chairman, introduced the meeting speaker, Marv DeBeque, N3NVY who will speak about running his radio repair business and will run diagnostics on members HT's. Greg said that he will be the featured speaker at the April meeting and will talk about his station which runs entirely on battery power. The May meeting will feature George, N3OWG, who will speak on computer ills.

Harry W3TEB said that he had two radios given to him that the donor wanted to be given or loaned to new hams. Bob said that the Club will come up with a procedure to handle them.

J.P., N3GWR made a motion to adjourn the business portion of the meeting. The motion was seconded by Barry, N3NVA and the meeting was adjourned at 8:25 PM.

de Bob N3OLH

For Sale

Drake L4B HF Amplifier $750.00

With Spare set of 3-500 Tubes $800.00

Tubes not sold seperately. Call Rick, K300 at 610 863-4971. No calls after 8:00 PM local time.

The FCC will now issue Technician-Plus Licenses

by Robin, WA3T

Until recently, a "No-code" Technician who passed the Morse code test has not been issued a distinctive license; the CSCE showing Morse ability (or a previous Novice license) has been the only proof of authorization to use the HF bands.

The FCC has announced that they will now issue formal Technician Plus licenses to those who qualify.

Any amateur who upgrades to Technician Plus at a test session since March 1st 1994 will automatically get a new license showing Technician Plus operator privileges.

Anyone who has previously qualified for Technician Plus, whether via the Novice license or the "No-code" Technician license, is entitled to apply for the issue of a formal Technician Plus license.

To do this, write to the FCC at 1270 Fairfield Road, Gettysburg, PA 17325-7245, explaining that you have qualified, indicating when you qualified, and enclosing a copy of the current Technician license and of copy of the CSCE proving that Morse test element 1A (or 1B or 1C) has been passed (or a copy of your previous Novice license).

Surprisingly, the FCC's notice did not mention using a Form 610 for this purpose, so it is up to the judgment of the individual amateur whether to do so. If you decide to accompany your letter with a Form 610, be sure to use one of the new ones introduced in February 1994. Previous revisions of the 610 are no longer acceptable to the FCC. New-style 610's are available at the DLARC test sessions at Gracedale, or I will send you one if you send me a stamped addressed envelope.

73 de Robin, WA3T

For Sale

New:

Palomar RX Antenna Noise Bridge	$70.00
Nova 10 (8 ohm) headphones	10.00
Pioneer SE-205 Stereo headphones	20.00
Sony tape recorder	15.00
Shure BG-4 Studio mike electret condensr, runs on one 1.5 v battery for 10,000 hours	90.00

In Mint condition:

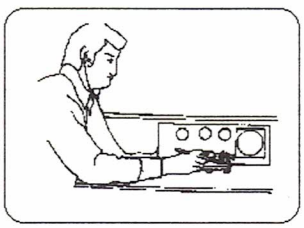
Astatic 10DA mike head	20.00
Heil Equalizer EQ-300	25.00
Vibroplex Brass Racer Iambic key	50.00
Realistic Electronic Reverb	15.00
HamTrac Message Memory keyer & Ham Iambic key	30.00
W2DU Beam Balun.	15.00

If interested in any of these items call Steve, K3DEM @ 610 868-0650.

This is rerun because of an error in the telephone number in the last issue.

Kenwood TH45AT 440 MHz Portable. Four Battery packs, two battery chargers, Instruction Manual. Used only once. Originally paid $460. for all. Yours for only **$175.00... Call Jim N3EYJ 610 559-8123**

Icom 2 meter IC2SAT Ht. Icom drop in charger adapter, Icom, rapid desk charger; Icom 7.2 volt battery; Icom 12 volt battery and Icom car lighter adapter. Cost retail was $703.00 **Asking $290.00. Call Joe, KB2LHI at the following numbers..**
Day 201 285-6626, after 9:30 PM call 201 335-9463.



Get ready

DLARC 50 coming.

In the May issue of the W3OK Corral, you will see the rules of the new worked 50 members of DLARC contest headed by George N3OWG. This contest was announced at the March meeting.

Join in the fun of working other members of our club on something besides 2 meters.

Facetious Remarcs

Did you work the special event station at Owl Plucking Day in Stuffbag, West Virginia? Or the one marking Dried Rutbga Week in Saskatoon, Saskatchewan? Well you just dropped the ball.

A radio experience for the whole family: Kamp Kyu-Wah-Rem, on scenic Lake Dipp in central Nevada. You'll get daily drills in kerchunking, creative RFI contentious ignorance and international Worse code, leading the Extraneous Class License, living conditions at the camp are certified "somewhat adequate" by the Hanoi branch of the SPCA.

*reprinted from **REMARCS**, the publication of the Mid-Atlantic Amateur Radio Club, Kay Cragie, WT3P editor.*



DEBRA NAIL

N3HZB

Debra Nail, XYL of Bob Nail, N3HWN became a silent key on Wednesday, February 23rd. She was 38 years old and worked as a computer operator at Meyers Benner Insurance Company in Allentown and worked part-time for Day-Timers Inc.

Deb and her husband Bob, to whom she was married for 15 years, both took their training in the DLARC novice/tech classes in 1990.

Proposed modem tax rumor

The letter shown, I received from the FCC on 2-26-94 concerning a proposed surcharge on personal computer modems that appears to have been a rumor due to an erroneous news article:

de Matt WA2TPX

Federal Communications Commission
Enforcement Division
Common Carrier Bureau
Informal Complaints and Public Inquiries Branch
Stop Code 1600A2
Washington, DC 20554
202-632-7553

Feb 23 1994

In reply refer to: IC-94-03727

Dear Correspondent:

This is in response to your letter concerning a rumor that the Commission is planning to impose a surcharge on personal computer modems.

The Commission has periodically received letters and telephone calls from computer modem users in recent years that continue to repeat an erroneous news article about this matter. It is our impression that the modem surcharge rumor was entered into computer bulletin boards that can be accessed nationwide, and therefore the story is recycled from time to time.

Let me assure you that there is no proposal pending before the Commission that would impose a surcharge on the use of computer modem.

Thank you for your inquiry.

Sincerely,
Delores C. Browder (sig)
Program Analysis Assistant
Informal Complaints and Public Inquiries Branch, Enforcement Division, Common Carrier Bureau

DLARC autopatch usage

by Don, W3LR

To All members and Users of the DLARC Autopatch:



The FCC has lessened the requirements for the operation of Autopatches on VHF and UHF repeaters. However they still "Strictly Prohibit" the use of autopatches for "Pecuniary Interest !"..

When an autopatch user asks the person on the phone "Did you hear from any of my CLIENTS ?"

This is a blatant violation of the purpose and intent of the "Amateur Radio Autopatch Service" Not only could the person making the Violation but the Repeater Trustee could get cited for allowing the violation.. Cellular Telephones have been made very affordable. It is not the intent for W3OK to allow you users to conduct business on the repeater.

WE ARE LISTENING !!!

for the DLARC Repeater Committee W3LR



James R. Hartman

(ex) K3LJL

James R. Hartman, 46, a science teacher at Blair Acadamy in Blairstown, became a silent key on Februrary 22, at the home of his father, James J. Hartman, **KA3AHO** and his mother Gloria with who he lived.

Jim was known not only for his specialized and excellent teaching methods but for his outdoor leadership ability at Blair. He has two sons, Seamuis and Devin and is survived by four brothers and two sisters.

In his teen age years he was active on amateur radio but in his later years, his teaching activities have caused him to leave his amateur activities while he became active in his scientific studies.

The Prez Sez

Wait just a second..

de Bob, KE3AW



...or two or three, to be more accurate. When using the W3OK repeater, please pause a couple of seconds after the courtesy signal between transmissions. Probably, at some time or another, most of us have neglected to put in the pause that refreshes our repeater. We need a pause after the courtesy signal. Why? And why is there a courtesy signal, anyway? Or that 90 second time-out feature?

The courtesy signal on our repeater is a signal the station has completed a transmission. It is an audible signal equivalent of an "over" and a signal for other station which needs to make an emergency call, or which has been waiting to join the conversation, to do so. It allows a station to slip in their callsign before the conversation continues, and to be recognized.

With similar intent, the 90 second time-out feature is on our repeater. Occasionally a question arises of why it is there. If a transmission goes beyond 90 seconds, the reminder "Repeater -- time out" supersedes the transmission. The repeater is silent until the station unkeys the mike. After the "Repeater Time Out -- Canceled," message the repeater resets, and the conversation can resume.

If Station B begins transmitting before the Station A ends its transmission, any station wishing to call does not have a chance to be recognized. Since the timer resets to 0 count on the courtesy signal, without the courtesy signal there is no reset. Without reset, the timer also continues to run, combining station A time and station B time toward the 90 seconds limit.

We don't hear the "Time out" phrase often. Ninety seconds is a long time to be transmitting without a break. But if the "alligator gets you," as some call it, consider it just a reminder you are not keeping your transmissions brief enough, or you are piggy backing on the time of the previous transmission because you did not wait for the courtesy signal.

Both the courtesy signal and the 90 second time-out feature are there for a positive reason. They are not intended to cause repeater user grief. And there is no need to be shy in inserting your callsign in the pause if you need to use the repeater.

I offer this message in response to questions asked recently about the W3OK repeater. Let's use the repeater with appreciation of value of these features.

de Bob, KE3AW President DLARC

New Media Systems PCS

Dick Tracy Would Love It!

by Joe, W3JD

In the last two columns, I talked about the proposed Bell Atlantic/TCI merger. As they say, though, it ain't over 'till the size-enhanced female sings (or something like that). Another round of FCC-mandated cable system rate decreases is being blamed for souring the merger deal, but insiders are claiming that the engaged couple had some other problems in working out their prenuptial agreement, and the FCC action became a convenient excuse. It's not the end of the world for video-on-demand prospects, however, and there are still plenty of other companies that are going ahead with their plans to blur the boundaries between mass media and common carrier systems. I'll keep you posted.

Another service with some interesting possibilities is one that could replace the increasingly-popular cellular telephone: personal communications services (PCS). Just as wired telephone systems are currently being used to carry much more than voice traffic, so PCS will provide a wireless system that goes well beyond the voice capabilities of cellular telephones. Using a PCS system, a person could log on to a computer network, operate a portable fax machine or some other graphics device, and, yes, hold a telephone conversation.

Three frequency bands between 1.85 and 2.20 Ghz. have been allocated to PCS, with separate sub-bands set aside for licensed and unlicensed systems. Unlike cellular assignments, which are limited to two companies per metropolitan area, PCS channels will carry up to seven systems in a given city--providing competition not only for the current cellular systems, but among different PCS suppliers, as well. Something new (and controversial) from a regulatory standpoint, is the fact that the FCC will be auctioning off PCS channel assignments to the highest bidder this spring. So much for considering the electromagnetic spectrum as a public resource!

Because of the potentially large number of PCS suppliers, one big concern is the standardization of technologies. Last month, four companies (under the name of the PCS Technology Advocacy Group) jointly recommended that there be uniform standards for all the interfaces involved: between portable handsets and over-the-air signals, between switching equipment and radio equipment, and between switching equipment and the intelligent network signaling system that is already operating in the cellular telephone industry.

The companies forming the group are a diverse bunch: Bell Atlantic and U.S. West (two Baby Bells), Sprint Corp. (a long distance company), and Time Warner Entertainment Co. (a large cable system and entertainment product owner).

In the face of the PCS threat, cellular phone technology continues to advance. Qualcomm and Sony have just joined forces to design and manufacture a new generation of computerized wireless telephones that will increase the capacity of existing cellular telephones by 10 to 20 times using code division multiple access technology. In a related development, the FCC has proposed rules for companies seeking to offer a low-earth-orbit satellite (600 miles high) global data and mobile telephone service. This is a separate service from the localized terrestrial PCS.

de Joe, W3JD

Digital Communication

by Joel, K9TBD

Setting up Your Packet Station

Guest Presley Smith N5VGC

Presley writes monthly packet radio column for the Plano [TX] Amateur Radio Klub (PARK). His article is very timely and well written so I decided to reissue it in the DLARC newsletter. [ed]



You must have at minimum a 2M FM transceiver (a HT will do fine), either a computer or a terminal, and a Terminal Node Controller (TNC).

For the radio, anything from an all mode 2M set to a HT will be fine. I picked up an old Kenwood 21AT with 3W of power at the swap meet for my first packet radio. I hooked it to a 12V source, used the ducky at first but then put a 5/8 wave ground plane antenna on the roof to get more range. So, the transceiver doesn't have to be fancy to get started. If you've got a 2M set, you've got the radio. Magazine articles exist to tell you how to interface HT's such as the new Radio Shack HT with packet. (CQ, April, 1992)

2m packet stations operate on 1200 baud so a standard FM transceiver can be used. Most 2M packet is also on simplex channels. For HF packet, 300 baud data is used with SSB. I'll discuss the equipment requirements for packet satellite operation in a future column.

Next, you need either a computer or a terminal for the user interface. A computer running a terminal program or just a dumb terminal can be used. For computers, any phone modem communications program can be adapted for packet use or customized packet radio programs are available. I have used PROCOMM that I use for phone modems with my packet system with no problem. I prefer terminal programs such as PACKCOM or LAN-LINK which have features specifically for packet work. Many packet programs are available on the phone BBS's

The advantage of a computer is that you have a place to store messages that you receive, and you can compose your messages before you get on the air. My spelling and grammar are much better if I compose the message first and then transmit it.

Finally, you need a TNC (Terminal Node Controller). A TNC contains a modem to decode the audio signals into digital signals. It also contains a microcomputer handle to convert the digital signals into text that can be sent over a RS-232 port to the computer or terminal. The CPU also handles the protocol overhead of the packet station. When you send data, it takes the text, puts error checking on it (CRC) and also puts it in an envelope for sending. When receiving a signal, it takes the data out of the envelope, and sends the message to the computer.

TNCs range from simple demodulators that let the computer do all the work to the most sophisticated DSP units that are now available on the market.

1. Baycom and Baypac modem consist of a demodulator system that is placed between the radio and the computer RS232 port and software in the computer does all the work. Cost less than $100.

2. Standard TNC's with the modem and CPU in the unit are available in many "flavors" from the AEA PK 88 at about $130 on up to the top of the line TNC, the AEA PK232 MBX at about $350 retail. Kantronics, PacComm, and MFJ all produce several different models of TNCs that range in price from $130 to $350.

3. The newest TNCs on the market are the DSP units from AEA or L.L. Grace These units use high speed Digital Signal Processing (DSP) chips and those chips are programmed to perform the various TNC functions. And you can purchase development kits to do your own if you desire. Price range about $750 to $900.

How do you determine what TNC is right for you? Perhaps a future column could cover this issue.

Nice article by Presley, N5VGC. 73 Joel

Remeber, Meeting night is April 7th

KIVA HALL, NCCAC
Talk in on 146.70 if needed

Ask JP

Soldering problem

by JP, N3GWR

Hi JP.,



Friday morning while being stuck here, my packet station stopped working. I checked several things and eventually found that one of the solder connections had broken In the din plug going into the radio. After trying for several hours to re-solder the connection, I had the din plug such a mess of solder I had to throw it away. I went to Radio Shack yesterday and picked up two din plugs. I got this one soldered this morning but the connections are not the greatest.

Do you know any **"trade secrets"** as far as soldering these little **@##@#.** The connections were referred to as **#$@#$@#** many times during the time I was attempting to work on them. I had no trouble with it at all when I re-wired everything to the Alinco from the Icom. The solder didn't seem to want to stick onto the metal. I will probably have to re-solder the connections some time in the not too distant future. Hope all is going well and that you got dug out.

73 John, N3GLZ

"Trade secrets"



Hi John,

My "Trade secrets" as far as soldering those little **@##@#'s** are as follows:

1. A really hot, really clean soldering iron is a necessity. Did you ever notice that after a few minutes on the tip of your hot soldering iron, the shiny hot solder turns kind of yellow? Its easy to clean this off by just rubbing the hot iron against a damp sponge or cloth just for an instant right before you solder the connection.

2. Use a good rosin core solder. What's good? Well, when I noticed KU3X (I gotta give credit!) Using a Radio Shack solder, I said to myself, it's good enough for me. The roll I use is labeled "light duty - 60/40".

3. Clean the metals to be soldered. This may be the trickiest.

Contamination will foil your attempt more often than any other problem. Sometimes I use a small jeweler's file or sandpaper to scrape the little **@##@#** down to some bare metal. In addition, I often tin the wire before I try to solder the wire to a small connector. When I say tin the wire, I mean heat it with the iron and flow some solder onto it. Tinning also prevents the wire from fraying, which is often a problem with those small connectors.

Here I've tried to stick to the fundamentals. There are some other tricks to joining odd metals together, but I don't know them. Ask around if you have a problem. There are kits on the market which solve the problem of joining dissimilar metals also, having a small bench vice to use as a third hand is good, because those little **@ ##@#s** are feisty!

73 JP, N3GWR

RF-Hill Amateur Radio Club Auction

Thursday March 31, 1994

Sellersville Armory, Park Ave Sellersville.

Doors are open 6:30 PM to 11:00PM for the Public.
Open for Sellers @6:00 PM.

Admission FREE!! Refreshments Available, Talk in on W3AI Repeater, 145.31. For further information call Linda, KA3TJZ @ 215 679-5764.

College Bound Amateurs

Scholarships are available

Licensed radio amateurs who will be going to college full-time in the Fall of 1994 are invited to apply for the 51 scholarships administered by the FOUNDATION FOR AMATEUR RADIO, INC.

Sponsors include QCWA, the 10-10 International NET and the Radio Club of America. Several awards, sponsored by clubs, are specifically designated for residents of DELAWARE, MARYLAND, NEW JERSEY and PENNSYLVANIA.

Application forms and additional information can be requested by letter or QSL card prior to May 1 from - FAR SCHOLARSHIPS, 6903 Rhode Island Avenue, College Park, MD 20740

Ima Lidd

S.W.R.

by Van - K3CP

Ima Lidd was pleased with the progress he was making in his studies of electronic theory and the fundamentals of ham radio. He was grateful for the help he was receiving from his Elmer and other hams in answering his many questions. Ima now thought he would ask his Elmer about standing wave ratio. He wanted to know what it was and how important it was to the operation of his antenna system. He also asked Elmer if it was difficult to understand.



Elmer said that what Ima needed to know for antenna work was not very difficult to learn. The standing wave ratio or S.W.R. is just that - a ratio. A ratio is a comparison between two numbers. For example - If Ima has $100.00 in his checking account and $10.00 in his savings account, the ratio or comparison of the two accounts would be 10 to 1. That is for every dollar in the one account there are 10 dollars in the other one. The ratio involved in Ima's question on S.W.R. is the comparison of two units either, volts or amperes. It doesn't matter which units are used as long as you are consistent. The ham text books refer to it as the V.S.W.R. or voltage standing wave ratio.

There are three things that are pertinent to the SWR. They are:-

1 S.W.R. is affected by the impedance match between the antenna and the feed line. If the antenna impedance is 50 ohms then the feed line impedance should be 50 ohms as well.

2 .The feed line impedance is determined by the design and construction of the line. This is determined by the manufacturer.

3. The antenna impedance is determined by the design and construction of the antenna. This is determined by the amateur.

The standing wave ratio is the comparison of two traveling waves that exist on the antenna feed line if it is not matched. The first wave is the one that goes from the transmitter to the antenna. This is known as the incident wave. The second wave is the one that goes back the feed line from the antenna to the transmitter when the load is not matched to the line. These two traveling waves meet each other along the line and produce a STANDING WAVE. When they are in phase the current in the line is at a maximum and when they are out of phase the current is at a minimum. The comparison or ratio of the maximum to the minimum is a number like the 10 in the bank accounts example. This number is the S.W.R. It is written as a ratio, 2.5 to 1 or 2.5:1.

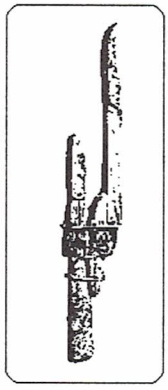
Well, Ima could understand where the incident wave came from, but he wondered what caused the reflected wave. Elmer explained that it was the wave caused by the mismatch between the feed line and the antenna. It's something like matching hi fi speakers to an audio amplifier. If the amplifier has an impedance of 8 ohms, the speakers should also be 8 ohms. The reason for this is that maximum power transfer from one circuit to another takes place when both circuits have the same impedance. The maximum power will be transferred to the antenna when it is the same impedance as its feed line. The signal going to the antenna is R.F. If there is no reflected wave, the power in the feed line is equal at any point in the line. The power equals the product of the current and voltage and it is the same at any place in the line.

If all the power goes into the antenna, none is reflected down the line, and the S.W.R. is 1.0:1. A very good condition. The S.W.R. of an antenna system is determined by the impedance match between the antenna and its feed line. Elmer repeated this for emphasis. Nothing else affects it. Any adjustment to the S.W.R. must be made where the antenna meets the feed line.... and for greatest accuracy the measurement should be made at that point as well. A half wave dipole antenna has an impedance of 75 ohms at the center of it. This antenna is 75 ohms at its resonant length. For example, let's say that a dipole is 66 feet in length, its resonant frequency would be about 7.090 Mhz. As a matter of general interest, if we convert the units to the metric system, that would be approximately 40 meters for a full wave length and 20 meters for a half wave length. At resonance the S.W.R. would be 1.0:1 under these conditions. Unfortunately, as soon as you change frequency, the S.W.R. increases.

de Van, K3CP

Watsa Wouff Hong?

by Earl Spencer, K4FQU



Over the years traditions have existed within the hobby that many thought indestructible. Are they? They were interesting and they reflected the heritage of our fine hobby.

The "Wouff Hong," the traditional symbol of ham radio, is the greatest of these and one of the oldest. Though not pretentious looking, for its purpose it could wield a lot of damage. The mythical Wouff Hong was the creation of an anonymous writer using the name, "The Old Man." After his death, "The Old Man" was identified as none other than Hiram Percy Maxim, the "father of ham radio." He co-founded the ARRL, which later took his callsign, WIAW.

Maxim often mentioned the Wouff Hong in his QST column, "Rotten Radio," circa 1917. His first reference to the now-legendary Wouff Hong appeared in an article entitled "Rotten QRM,"_referring to unnecessary interference by poor operators.

The Wouff Hong was one of three mythical instruments of strangulation or torture designed by The Old Man (along with his other creations, the Rettysnitch and the Uggerumph) to attack poor operating practices and ensure good radio-operating techniques. The Wouff Hong appeared in its physical form at the ARRL headquarters in time to be pictured in the June 1919 QST, and it is displayed even now at ARRL Headquarters.

From this mystical symbol emerged the "Royal Order of the Wouff Hong," a sort of amateur radio secret society intended to symbolize an honorary inner circle of the League. Initiations into the society are still conducted during League conventions_always at the stroke of midnight.

Another tradition still in use today is the term OM, whose roots trace back to Hiram Percy. It evolved from Maxim's pseudonym, In the "old days," the crashing noise of shipboard spark gap transmitters and shore installations resulted in their being banished to their own "shacks" in isolated locations. Today's "hamshack" derives from that usage.

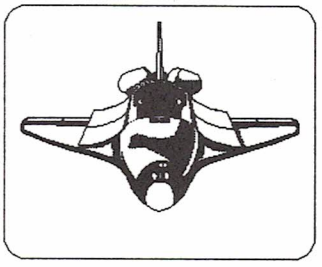
As you can see, many of the ham traditions of our forefathers continue to this day. And "old timers" like me take these traditions seriously.

The original is still on display in the ARRL Museum in Newington, CT.

edited from the June '93 "Florida Skip"_Andy Clark, W4IYT, Editor/Publisher, who credits the April '93 Fort Myers ARC Modulator_Earl Spencer, K4FQU, Editor.

Hello Again Sergei !

by Tom N3CXP



Sergei Krikalev, U5MIR was ending his contact with the Chariton High School in Chariton, Iowa. Not wishing to disturb this very early morning SAREX contact, I nervously watched the satellite footprint on my computer, until I was reasonably sure that STS-60 was going over the Chariton radio horizon.

When Segei lived aboard Mir for his year plus mission, I enjoyed many contacts with him. We often talked about his young family and mine, and he even got to know my kids by name. Yet, now I only had about 120 seconds or so to renew our old acquaintance. I hoped the SAREX working group had not changed the uplink frequency from my previous STS-56 contact.

Sergei seemed nervous as he carefully answered questions and then a quiet lapse of dead air time:.. "KB0IWE from U5MIR?"

I transmitted: "U5MIR from N3CXP"..

Instantly, he responded: "say again?"..I repeated my call.

For a moment he listened for KB0IWE, and then without hesitation "N3CXP from U5MIR". I reminded him of my name and QTH, but it wasn't necessary. Maybe it was my imagination, but he seemed more relaxed. His tone became informal, as he greeted me and answered my query about how it was going aboard Discovery:

"Hello Tom, I remember we talked with you during my Mir space flight. Ahh, they are going pretty well and now we taking Wake Shield back in payload bay, and all experiments continue on board, over."

Only a minute or so remained. "Very Good! I've been watching you on television..I enjoyed the plumbing fix (referring to a Rube Goldberg patch of an air conditioning duct with a card board flight atlas cover) ..your interview with President Clinton..Sergei, I'm just so glad we were able to hook up again. I got up extra early this morning and found you....here...you're going to go LOS very shortly! 73 and good luck!

He seemed to not want the QSO to end: "Thank you, very much!..You're signal is still very good and strong..we flying over coast now and probably we very far from you but you have ...very ...good...sig..nal ov..er."

.."73..73" I sadly called in the blind.
de Tom, N3CXP

Ham radio dictionary

Dipole Very sick tadpole

Ohm Where a British ham lives

Volts What a politician needs to get elected.

Inductor Drafting a woman into the army

Resistor What a man should if attracted to a female

Antenna Uncle Joe's wife

Photomultiplier Person who makes double exposures

Henry A guy who's wound up

Microhenry A little guy who's wound up

Dummy Load A truck full of mannequins

LED A lid with an extra class license

Yagi Boom Explosion in JA land

Log Periodic Sawmill feed

Noise Figure Comment about Miss America

Load Line Freight Railroad

FET New French Island prefix

Solid State KL7 in December

Feedback Letter to the editor

Transformer Oil Beauty Aid

author unknown

Morse Code: the Universe Language

By Clark J. Evans, Sr. WA4DLL

I have been asked by visitors to the Museum of Science and Industry Amateur Radio Station in Tampa, Florida, to write up this true story.

In February of 1991 an American woman and two Japanese boys came into our amateur radio station at the museum. The American woman, the boys' tour guide, told Lee Pallet, KB4FBX, and me, "You won't be able to talk to these boys. They speak no English." But then she said the Japanese boy in the corner was interested in the station, because he, too, was a ham radio operator.

When Lee heard that, he whistled, "CQ CQ." One boy answered instantly also whistling in Morse_and Lee began translating for the tour guide. She was incredulous at first, saying,

"You can't be communicating with him!" But Lee answered, "Oh yes, we certainly are, and told her their names, where they were from, and more

. We hams can communicate regardless of native language. Morse code, with its standard abbreviations, is a universal language.

** CONTEST CALENDAR **

by Barry, KU3X Contest Editor

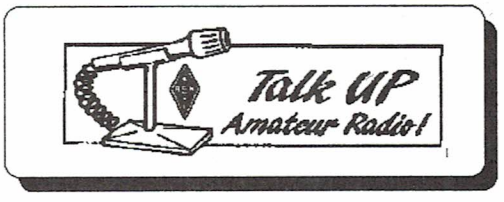
Apr 2-3 Holyland DX Contest
Italian YLRC XVll Int'l
SP-DX CW Contest
Apr 6 West Coast Qualifying Run (10- 40 WPM)
Apr 8-10 Japan Int'l DX Contest
MARAC County Hunters SSB Contest
Apr 13-15 DX-NA YLRL CW Contest
W1AW Qualifying Run (35-10 WPM)
Apr 16-17 SARTG World Wide Amtor Contest
Apr 18 ARRL VHF/UHF Spring Sprints
Apr 23-24 Helvetia Contest (HB9)
Apr 26 ARRL Spring Sprints, 222 MHz
Apr 27-29 DX-NA YLRL SSB Contest
Apr 28 W1AW Qualifying Run (10-35 WPM)

CONTEST TIP #23

Digital Signal Processing: DSP is the filtering system that everybody is starting to use. K3CP wrote an article explaining DSP in an earlier issue of this newsletter so there is no need to repeat it here. W9GR has a unit, DSP II, that lists for $299. Timewave Technology has two models out.

The DSP-9 lists for $169 and the DSP-59 lists for $299. You won't got wrong getting any of the above DSP filters. For the price, the DSP-9 is a great little unit and is very popular with big gun DXers and contesters. The Kenwood TS 950sdx has digital signal processing built in but it cost a lot more than $299.

de Barry KU3X



March 4th 1994 VE session

At this session, five candidates braved the snowdrifts to take a total of seven elements. There was one upgrade, and two new licenses...

Walter M. Snyder,N3NJF	**upgrade Tech w/HF**
Juan J. Lopez	**new Technician**
Sharon W. Reamer	**new Technician**

The VE's at this session were Bob, KE3AW; John, WX3C; Bob, KU3K; and Robin, WA3T.

The next test session will be on April 8th; team 4 will be in attendance.

73 de Robin, WA3T, Team Liaison Alternate

The Voice on the DLARC Info Line

by Robin, WA3T



(610) 820-9110

Although Wendy, KA3UZO is rarely heard on the radio or seen at club meetings, she plays a significant supporting role in the club, keeping permanent records of calls received on the club's answering machine and mailing out information packets to prospective hams. Hers is (usually) the voice you'll hear when you call.

Club members often ask how many calls we receive on this machine. It's hard to say, because most members who call in to check on the latest news don't leave a message (and that's OK). Recently we've been getting an average of one message per day which requires an answer.

Perhaps it is worth outlining how Wendy and I respond to these messages. The machine is in our basement, and is checked once a day. Sometimes we miss a day if the roof is leaking or something equally joyful is crowding our lives.

Requests for mailed information packets are usually responded to within a couple of days. Our standard information packet gives some background information on ham radio and the different license grades, describes the DLARC, tells how to get to the meetings and join the club, and tells about VE test sessions and Novice/Technician classes and how to get to them.

Requests for call-backs are responded to within a few days, depending on my schedule. It sometimes takes longer than this to make the connection if the person involved is rarely at home and has no answering machine. If my call reaches an answering machine or a family member, I give our personal telephone number to enable a return call.

The telephone calls run from a few minutes to as long as an hour. Apart from requests for standard information about classes or test sessions or how to get to the club meetings, we respond to a wide range of needs; instructions on using PC's, antenna problems, where to get equipment, advice on what kind of rig to buy (which is treated with the same delicacy as the question, "Who should I marry"), all the way to an angry earful from someone who had been told there were only 30 questions on the test, and was upset because the book he bought had 300.

Most people seem to appreciate this service, but occasionally expectations run higher than we can (or are willing to) support. Once or twice, members have judged that telephone follow-up they requested to their prospective-ham friends was not immediate or aggressive enough. But this is a hobby; if the numbers we call go unanswered, evening after evening, we may slow down a bit!

Our information packet is designed to answer nearly all the questions we have been asked by prospective hams in the years since the machine was installed. While we are willing to telephone when it's necessary, it makes much more sense for us to mail out an information packet first, because we can usually get the basic information into people's hands quicker by mail than by playing telephone tag.

There are several ways club members can make this service more effective...

If you are running a club event which you would like included in the announcement on the answering machine, please call in and leave a clear message indicating exactly what you would like said. Don't rely on Wendy or me picking up the information in some other way; even if we know about it, we may not think of including it in the announcement. If you have an urgent message for me or Wendy, please call our personal number; we're in the roster.

If you are calling in for information, please leave your address as well as your telephone number. Especially if you are a new member and are not in the annual roster or our (1989) callbook, just leaving your callsign isn't enough. It's true that we could call Dick, KA3MOU, the club treasurer, hoping that you are in his database, or we could connect up our packet machine to get the information off somebody's CD-ROM, but there's a limit to the investment in toll calls we are willing to make, and to the detective work we want to do!

If you are calling on behalf of a prospective ham, please leave their full address, so that we may mail them an information packet. If after reading this packet they still have unanswered questions, and they are interested enough to make the call, then we'll be happy to call them back. Better still, persuade them to call in themselves in the first place; if they do this they will have some investment, however slight, in the process. Our experience has been that if prospective hams are not motivated enough to call the club's answering machine for themselves, they'll never get a license anyway.

Please remember to give complete and clear information. The tape is voice-actuated; it will run as long as you talk, so please take the time to speak clearly, to minimize the detective work we need to do to clarify that mumbled address or telephone number! Wendy and I will both thank you.

And next time you call in, leave a word to Wendy for her work behind the scenes for the club.

73 de Robin, WA3T

Why not bring a non-member friend to our next DLARC meeting.

The Electronic Hole theory exposed as fraud



Have you ever been confused by the electronic hole theory of semiconductor physics ?. I don't have a degree in anything but body temp. Of 98.6 But I know my stuff when it comes to experience in electronics. After a careful study of this illusory phenomenon semiconductor physics ?.

After a careful study of this illusory phenomenon here is what I have found.

After years of study and experience in electronics I have come to realize that the hole theory may not be correct. My theory which I have proven time and time again in service shops across America is that all electronic devices and especially ic's work on smoke... Yes that's what I said smoke!

I have just recently learned that every electronic device manufactured and all IC makers encapsulate a certain amount of black smoke in every one of their devices... The smoke is what does the work and works the magic inside the device, indubitably you have often noticed that a component will quit working when this smoke leaks out...

I have documented this many times and it conclusively proves my theory. After all when a storm comes up the sky gets black... The lightening starts to flash through the black clouds which must be smoke.....Because when the sky clears and is no longer black the lightening stops ! So the smoke is the answer to electron flow. I rest my case...

de Wayne WD4PRF

Reprinted from ***Ham on Disk,*** *Todd Clayton, VE3OZL editor.*

A quote from Arthur Collins

Art Collins, founder of Collins Radio when aged 16, is quoted as saying: 'The real thrill in Amateur work comes not from talking to stations in distant lands, not from receiving multitudes of QSL cards from all the world, although these are things to stir your imagination, but (from) knowing that by careful and painstaking work and by diligent and systematic study, you have been able to accomplish some feat or establish some fact that is a new step toward more perfect communication.

from the "QARDATA Inc., NEWS"

Have you heard this one?

Supplied by Rod, W3GYJ from the Qardata News

We've all heard about those remote islands beloved of DXers; you know, the one's you can only get to by ship and you have to get on to by open boat. On one such DXpedition, one of the crew was a banker. It was stormy when they arrived and the banker fell overboard when trying to land on the beach. While his friends were frantically looking for a life preserver, one of the mother ship's sailors called to the banker:

'Hey, can you float alone?'

'Of course I can,' gasped the banker, 'but this is no time to discuss business.'

HF Beacon Station on the air

from the Qardata Inc. NEWS
supplied by Rod, W3GYJ

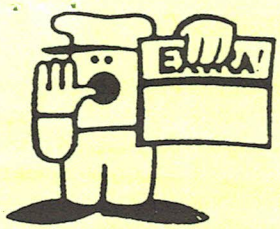
A new beacon began operations on May 13, 1993 from Cape Prince of Wales, Alaska (67N, 168W). Its callsign is NAF and it runs 100 watts to a 3-band fan dipole on the following schedule: 00 and 01 minutes after the hour on 5604 KHz; 20 and 21 minutes after the hour on 11004 KHz; and 40 and 41 minutes after the hour on 16804 KHz. Transmissions are narrowband CW and FSK. The beacon will be monitored by government facilities in Fairbanks, Alaska; Seattle, Washington; State College, Pennsylvania; and San Diego, California. The project's sponsor is the Naval Security Group Command in Washington, D.C.

A government spokesperson said the project is 'purely scientific'. The purpose of the project is described as to provide a 'rigorous verification' of field strength models done by HF propagation prediction programs like IONCAP which are used, for example, to generate the predictions published monthly.

Reception reports are encouraged and will be acknowledged with a colorful QSL card. Send them to Bob Rose K6GKU, Code 54, Catalina Blvd., San Diego CA 92152; or to Dr. Gus Lott KR4K, Code GX, COMNA VSECGRU, 3801 Nebraska Ave NW, Washington, DC 20393.

Another beacon, from Rarotonga in the South Cook Islands, is scheduled to go on air in the fall (spring in the southern hemisphere), on low VHF frequencies as well as the three NAF frequencies.

When it is time to Join ARRL or renew your membership, be sure to contact Treasurer Dick Dech. DLARC benefits from this.



The Delaware-Lehigh Amateur Radio Club, Inc.



HAMFEST & COMPUTERS

Sunday, August 14, 1994



Career Institute of Technology, Easton, Pa.

Vendor Set-up at 6 a.m. Open to Public at 8 a.m.

ADMISSION: $4.00

Unlicensed Spouse & Children Under 12 Admitted Free

Tailgater: $7.00 Inside Vendor (includes table & some electric): $25.00

(Includes One Admission)

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- Introduction To Ham Radio
- VE Examinations
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- Electronics Test Bench
- DXCC Field Checking
- High Power Electricity Demo



Handicap Accessible

For more information please call Bill Goodman, K3ANS - Hamfest Chairman
Office (610) 253-2745 or Home (610) 258-5063
Also call DLARC Answering Service at (610) 820-9110



TALK-IN 146.70 W3OK Repeater



(over)

(over)



Name_____ Call_____ Date_____

Address_____ Number of admission tickets @ $4.00_____

City_____ State_____ Zip_____ Number of tailgate tickets @ $7.00 _____

Telephone ( ) _____ - _____ Number of Inside vendor tickets @ $25.00_____

Make checks payable to Delaware-Lehigh ARC, Inc.

TOTAL AMOUNT ENCLOSED $_____

Mail To: The Delaware-Lehigh ARC, Inc.
RR 4 Greystone Building
Nazareth, PA 18064-9211

Career Institute of Technology

Formerly The Vocational-Technical School
Eastern Northampton County

5335 Kesslersville Road, Easton, Pa 18042
Phone (610) 258-2857 Fax (610) 258-0805

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Test Development
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DIRECTIONS TO CAREER INSTITUTE OF TECHNOLOGY

FROM HARRISBURG AND WEST:

Take I-78 East & US 22. Where I-78 and US 22 split, bear right after the Fogelsville Exit onto US 22 East towards Whitehall, the ABE Airport, and Easton. Follow US 22 East to PA 33. Take PA 33 north to Stockertown Exit (Route 191). At end of exit ramp turn right. Follow Route 191 North for 150 yards to traffic light. Turn right onto Sullivan Trail. Follow Sullivan Trail south for 1.5 miles to traffic light (First Fidelity Bank is on right corner). Turn left at traffic light onto Uhler Road. Follow Uhler Road for 1 mile to traffic light. Turn left at light onto Kesslersville Road. School is located 1 mile north on Kesslersville Road on the right side.

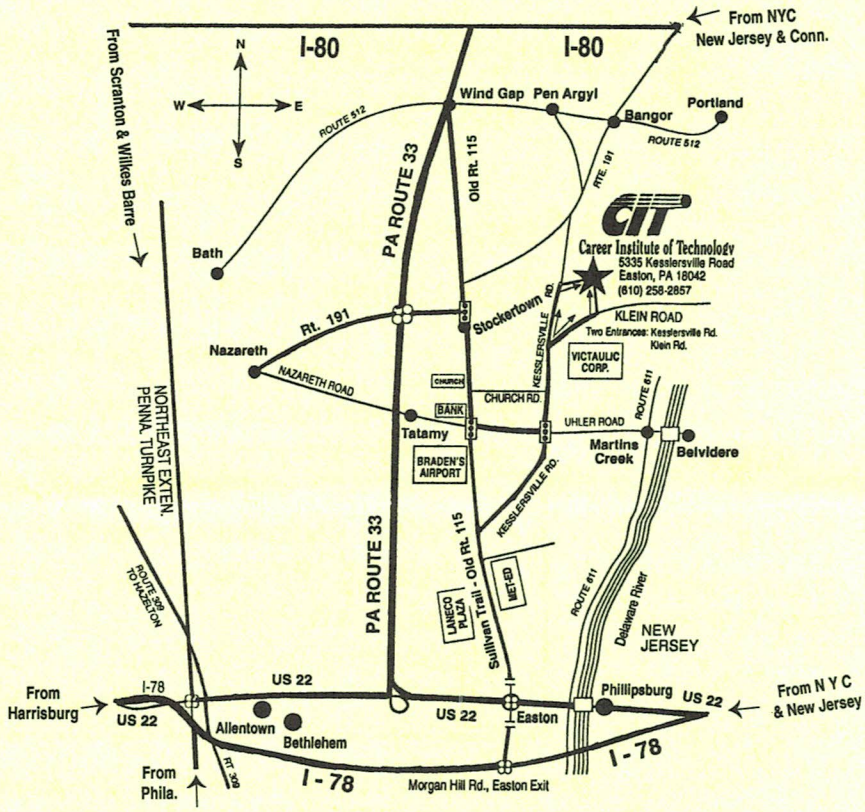
FROM NORTHEAST EXTENSION OF PA TURNPIKE:

North from Philadelphia or South from Wilkes Barre-Scranton.
Exit Northeast Extension of PA Turnpike at Lehigh Valley exit onto US Route 22 East. Follow directions above from US 22 East..

FROM NEW JERSEY, NEW YORK, AND EAST:

Take Interstate 78 West.. Exit onto US 22 West at Phillipsburg, NJ. Follow US 22 West through Phillipsburg, NJ, cross over Delaware River Toll Bridge, continue on US 22 West (past Easton, PA 25th. St. exit) and continue to PA Route 33. Take PA Route 33 North and follow directions above.

MAP IS NOT TO SCALE



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1994 HAMFEST ANNOUNCEMENT

EASTON HOSPITAL
A member of Valley Health

Donna Mulholland
President and
Chief Executive Officer

March 8, 1994

Mr. Clarence Snyder
717 Porter Street
Easton, PA 18042-1548

Dear Mr. Snyder:

On behalf of Easton Hospital, I would like to thank you and the Delaware Lehigh Amateur Radio Club for your assistance in transporting Hospital employees to work during our recent snow storms. Your efforts helped us maintain appropriate staffing levels to care for our patients.

The employees you picked up were grateful and very complimentary towards your efforts in driving them to work.

Again, thank you for your assistance in bringing our employees to work.

Sincerely,

Donna Mulholland
President and
Chief Executive Officer

DM/mk

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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The W3OK CORRAL is published monthly and is the Official Publication
of the Delaware-Lehigh Amateur Radio Club Inc.

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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
Clarence Snyder, W3PYF, Editor..717 Porter Street, Easton, PA 18042

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