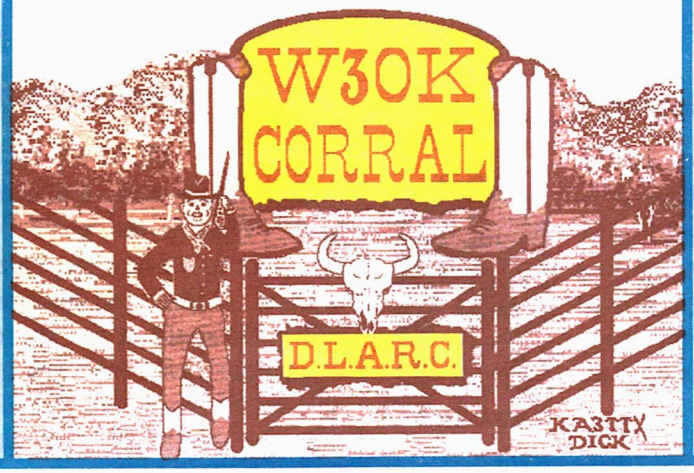
DELAWARE-LEHIGH AMATEUR RADIO CLUB, INC. W3OK

November 1993



SPECIAL SERVICE CLUB
ARRL Affiliated Club

Meeting November 4 NCC Room 292 West Plaza

What is VHF?

by Bill, K3ANS, DLARC Program Chairman

Do you consider 6 meters the low band? Is DX 10,000 miles or 1000 meters? Is a long element 3 inches or 30 feet? If 3 inches are your bag, we got a program for you! The Rochester VHF Group, N2WK Multi-operator contest team prepared a video tape of the June 1991 VHF QSO Party: "Winning on the Hill"

You do not need to know CW to contest in the VHF frequencies, but it still is better than FM or SSB. This program caters to our members who prefer gigahertz over kilohertz. Most everyone you meet on 10 gigahertz speaks English! You can shake hands with your DX stations. But the band can also open for round the world QSOs on VHF frequencies.

The Rochester VHF Group is a principal competitor to our local Mt. Airy VHF Society, better known as the Pack Rats. Two of our DLARC members are Pack Rats, W0RSJ and WD5BRP. They can interpret this UHF and VHF contesting. Learn how to erect competitive sophisticated stations at low budgets. Go mountain topping. Another VHF contest is coming in January. Consider being a "roamer" and make millions of points. See you November 4 at the Northampton County Community College, between Easton and Bethlehem, PA; 7:30 PM. Bring your VHF buddies along. Invited your Pack Rat friends. Talk in on W3OK/R, 146.70 megahertz (VHF).

73, Bill Goodman, K3ANS;

Program Chairman (and kilohertz fan)

- The PA Party - 1993 -

by Ray, W3TDF, DLARC PAQSO Chairman

It looks like about 60 entries from Delaware-Lehigh Amateur Radio Club this year, up from last years 50, but below our best effort (1990) with 67 entries.

To give credit to our current effort, we have new entrants, such as N3OWG, N3NVA, N3OUC, N3MKZ and N3LNI with nice showings. Then I would like to recognize N3GWR, N3GXW, N3GLZ, WA3IHX, N3KWN, WU3M, KB3TS, KA3TEQ and WC3Y, all of whom posted significantly improved scores over last year. It is also unfortunate that W3FYK, NU3L, KA3MND, KA3MOU and K3OO were among the missing, for one reason or another.

The current tally looks like about 1.8 mil aggregate, which will rate 4th in the all time highs, but more important, (tongue in cheek) we expect will be enough to take the state trophy. Congratulations and thanks (from DLARC) to all those who were able to contribute.

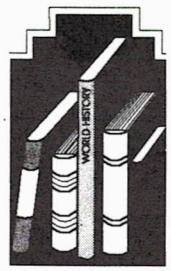
In my records, I find that in the past 4 years that I have been keeping records a total of 102 members of the DLARC have participated in the PAQSO party, can you imagine, what could have happened if all had particpated this year?

Just wait until next year, we'll show them!!!!!

73 de W3TDF.

Just the Minutes

by John, N3IGA, Secretary



The October meeting was held in KIVA Hall at NCC. President Robin Moseley, WA3T, called the meeting to order at 7:30 pm. There were 90 members and guest present. The minutes were approved as printed in the newsletter with Amy, KD3TI, making the motion and Van, K3CP, seconded.

Dick, KA3MOU, read the Treasurer's Report which showed an ending balance as of September 31 of $4249.18. Bob, K3GOX, made the motion and Clarence, W3PYF, seconded to accept the report.

Welcome the following new members to the DLARC:
Neil Stackhouse, N3QEK

Martin Hoppe, W3/DK9LJ

Frederick Lanshe, call pending

Barry, KU3X, presented Bill, K3ANS, with an endorsement for working 228 countries over the 100 DXCC countries.

The election results are in and the votes are counted. The results are:

Pres.-Bob Green, KE3AW

V-Pres.-Tom Frobase, N3LLL

Sec.-John Holmes, N3IGA

Tres.-Dick Dech, KA3MOU

EXECUTIVE COMMITTEE

Ray Bilger, W3TDF;Bill Goodman, K3ANS; Chris Hornaman, NU3L ;Bob Kratz, KU3K;Clarence Snyder, W3PYF and Robin Moseley, WA3T

Harry, W3TEB, presented Clarence, W3PYF, with a home-brew trophy for the outstanding job he has done for the Amateur community.

Bill, K3ANS, announced that Greg Pioppi, KB2ANG, will start in February as the new program chairman. If you have any ideas for programs, talk to Greg

The featured program was Richard Moseson, NW2L, who showed some of the new CQ videos he produced. He gave a quick view of the 4 videos and then let the members present pick the one they wanted to see. The one they picked was "Getting Started in Amateur Satellites". It was quite interesting to see what is needed to get started.

de John, N3IGA

Hitting the Target

by Bob, KE3AW, President DLARC



DLARC! Now an amateur radio club of 425 members. What is our goal? Certainly not to see how large we can become. Rather, the membership size is the result of our attraction -- amateur radio activities available to all members. A club of this size should have something for everyone. Is there something for you? Are you, as a DLARC member, involved in the club as much as you want to be?

We aren't intending arm-twisting, but we are intending another invitation for your involvement. Are you aware of all the club's activities and events you can participate in?

We have a healthy camaraderie. We see that at the meetings. We also have a healthy financial status. These features allow us to continue the progressive movement of the club.

We are maintaining and improving the 2 meter and 440 repeaters. The club HF station is up and running, available for club member use. We have ARES/RACES nets, communication for charity activities, field days, club picnics, and our award winning newsletter with technical and general topics. We sponsor classes and VE testing sessions leading to initial licenses and upgrades. We have committees for a variety of interests. We are affiliated with ARRL, which we can access as a resource.

Do you have an interesting idea to share with the club? Why not write an article for the newsletter?

Do you need a clarification on the club's policy on an issue? Are you wondering about using the club station? Do you have an idea for a club meeting presentation which you would like to present, or have presented, but you don't know how to move your idea along?

Want to become involved in the club's hamfest? Need directions on how to get into, or improve in DXing, contesting, VE testing, home brewing, antenna designing, special events, SSTV, etc.? Give a board member a call.

We want to represent you. One of the toughest jobs in doing this is to figure out what the silent majority is thinking. Tell us your opinion. Are we hitting the target?

de Bob, KE3AW

"HOW TO KNOW YOU ARE GETTING OLDER"
(FOR THE CHRONOLOGICALLY DISADVANTAGED)

o Everything hurts, and if it doesn't hurt it doesn't work.
o The gleam in your eyes is from the sun hitting your bifocals.
o You feel like the night before, but you haven't been anywhere.
o Your little black book contains only doctor's names.
o You get winded playing chess.
o Your children begin to look middle-aged.
o You join a health club but don't go.
o You begin to outlive enthusiasm.
o Your mind makes contracts your body can't meet.
o You know all the answers, but nobody asks the questions.
o You look forward to a dull evening.
o Your favorite part of the paper is "25 years ago."
o You sit in a rocker, but can't get it going.
o Your knees buckle, but your belt won't.
o You stop looking forward to your birthday.
o You only turn out the light for economic reasons.
o You remember today that yesterday was your wedding anniversary.
o You're startled the first time they refer to you as "Old Timer."
o You sink your teeth into a steak and they stay there.
o Your pacemaker makes the garage door open when you see a pretty girl.
o You get exercise acting as a pallbearer for friends who exercised.
o You don't have enough room in the medicine cabinet.
o The best part of the day is over when the alarm goes off.

author Unknown

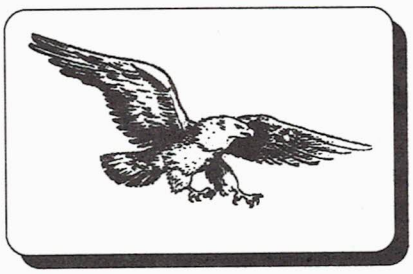
From the Officers of DLARC and the Staff of the OK Corral, Have a very Happy Thanksgiving



LESSONS FROM GEESE

supplied by Dave, WD5BRP

Follows is a great story and all of us, as Amateurs should think of this in dealing with our friends on or off the air.



1. As each bird flaps its wings, it creates an "uplift" for the bird following. By flying in a V formation, the whole flock adds 71% to the flying range than if each bird flew alone.
LESSON: People who share a common direction and sense of community can get where they are going more quickly and more easily because they are traveling with the combined thrust of one another.

2. Whenever a goose falls out of formation, it suddenly feels the drag and resistance of trying to fly alone, and quickly gets back into formation to take advantage of the "lifting power" of the bird immediately in front.
LESSON: If we have as much sense as the goose, we will stay in formation with those who are headed where we want to go.

3. When the lead goose gets tired, it rotates back into the formation and another goose flies at the point position.
LESSON: It pays to take turns doing the hard tasks, and sharing leadership -- with people, as with geese -- interdependent with each other.

4. The geese in formation honk from behind to encourage those up front to keep up their speed.
LESSON: We need to make sure our honking from behind is encouraging -- not something less helpful.

5. When a goose gets sick or wounded, two geese drop out of formation and follow it down to help and protect it. They stay with it until it is either able to fly again or dies. Then they launch out on their own to join another formation or rejoin their own flock.
LESSON: If we have as much sense as the geese, we'll stand by each other like that.

Ima Lidd

S.W.R.

by Van - K3CP



Ima Lidd was puzzled by standing wave ratio. He had been reading about it, but was confused by much of it that he decided to ask Elmer.

Elmer said that the standing wave ratio or S.W.R. is just that - a ratio. A ratio is a comparison between two numbers. The ratio involved in Ima's question on S.W.R. is the comparison of two units either watts, volts or amperes. It doesn't matter which units are used as long as you are consistent.

The standing wave ratio is the comparison of two traveling waves that exist on the antenna feed line. 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 returns back down the feed line from the antenna to the transmitter when the load is not matched to the line. These two 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 ratio of the maximum to the minimum is the Standing Wave Ratio or 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. This mismatch can be caused by a difference in the impedance (resistance and reactance) of the antenna and the feed line. Circuit elements that are reactance cannot absorb power. The reactance is either inductive or capacitive. It's inductive if the antenna is too long and capacitive if it's too short. The maximum power will be transferred to the antenna when it is the same resistance as its feed line.

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 square of 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 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 its center. 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 20 meters for one wave length or 40 meters for one 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.

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

It then falls to the amateur to make sure that the impedances match each other. If Ima cuts a wire a half wave length long and installs it as a dipole antenna, it will have an impedance of 70 ohms. The impedance will be made up of resistance only - no reactance. Unfortunately this is true only at resonance. Resonance occurs when the wire is 1/2 wave length long. 7150 Khz., the middle of the "forty meter" band, has a wave length of approximately 42 meters. So - a half wave length would be 21 meters long. If we were on the metric system, we would measure a wire 21 meters long and we would have a 1/2 wave length antenna. We must therefore convert to U.S. units. We do this by dividing meters by .3048. That calculation yields a wire that is approximately 69 feet. Making adjustments for the insulators and other factors, the physical length of a 1/2 wave antenna on 7150 Khz. would be 65 and 1/2 feet long.

A practical formula is:-

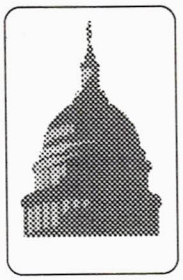
Length (feet) = 468/frequency (Khz.)

Elmer concluded the discussion by saying that he hoped the nation would continue its efforts to convert to the metric system.

de Van, K3CP

Clinton Administration Extends BeltTightening To Hams

by Bill, K2TNO



Washington, D.C., April 1 (from a correspondent)_The Administration revealed today the latest in its attempts to downsize the federal deficit. The FCC asked the Federal Power Commission to determine what impact a few-percent reduction in amplifier output power would have on the federal power grid.

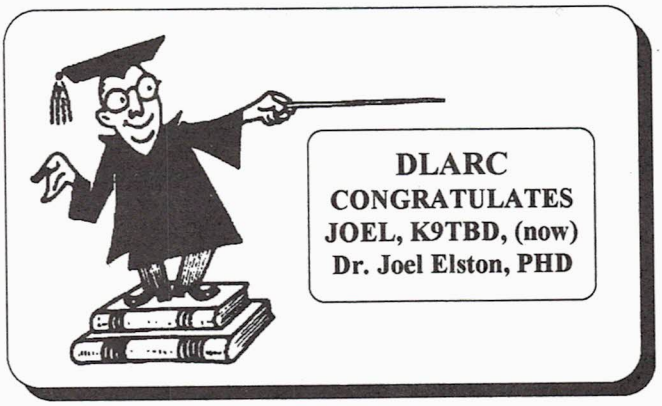
Rod Ham, the new member of the FCC charged with cleaning up the mess in amateur radio, was asked for details of the plan. "We've concluded that the power output has gone up every year since the early 1980's," he said. "This escalation of power must stop if we're to protect the ether from destruction by the year 2000. What is left of 75 meters should be preserved for our children. Sure, there aren't many untouched kilo-Hertz left that still have the natural beauty of thirty years ago, but we can at least stop the continued erosion. Excess power has caused this problem and now hams will just have to tighten their belts and take their lumps like everyone else," he said, while petting his spotted owl at his home in the Ozarks. "So we convened a committee of experts in Washington who know what is best for everyone on the planet. They met for days, took testimony, and concluded that you hams have had a free ride for too long. From now on the output power allowed below 30 MHz will be reduced by an 2.7 percent per annum, until the total power radiated by all hams falls below the 1981 level."

A reporter asked him, "Will the administration at least distribute the cuts in power equally for all hams? "Everyone on the bands is affected by power overuse, but it's well-known that DXers and contesters are the worst abusers," he replied.

"A compromise was struck so that the farmers and other legitimate interests such as the Arkansas Porcine Agriculture and Xenophobia Preservation Net can continue to operate unaffected by these loonies who only operate on the weekends and don't say anything except to swap numbers. DXers and contesters can afford to give up a greater share that the rest of hamdom. The subcommittee hasn't arrived at final numbers yet, but it looks like DXers will lose 87 percent of their power privileges, and contesters will lose 55 percent. That should allow us to give away 400 to 500 Watts to every new licensee."

from the April '93 Texas DX Society "The Bullsheet"_Joe Staples, W5ASP, Editor

Editors note: I know I should have saved this until the April issue, but it was too good...de W3PYF



Nothing is as it Seems

Judicious application of the rules of algebra may be the answer to many of our problems! Can you find a flaw in the logic??

$$a = 1$$
$$b = 1$$
$$a = b$$
$$a2 = ab$$
$$a2-b2 = ab - b2$$
$$(a + b)(a - b) = b(a - b)$$
$$a + b = b$$
$$1 + 1 = 1$$

Therefore

$$2 = 1$$

de Chris, NU3L

Doing What Comes Naturallly

by Clarence, W3PYF

Two weeks in a row, our ARES group and DLARC were busy with safety communications.

On September 26th participated in the **"Habitat for Humanity" 1993 Bikeathon.**

With Bill, W3FYK as net control the following members Brad, KA1RAH; John, N2MWQ; KD3SQ; Dave, N3EYT; Joe, W3JD; Dave, WD5BRP; Paul, KA3MTY; Bob, KE3AW, Bruce KA3ONZ; and Clarence, W3PYF, all went very well. Only one lost biker, but he was found later.

On October 3rd, the **American Heart Association Walk** in the Palmer Township area, John, N3IGA was net control and particpating were: Tom, N3EBH, Chuck, KD3SQ, Barry, N3NVA; Leo, KA3TMR; Carl, KA3TEQ with Marcia; John N2MWQ and Clarence,W3PYF.

Computer- Daffy

From ARNS, March 1993

Apple: seduction device with a nice display, mouse and keyboard.

Bar Chart: shows where to go when it's Miller Time



Binary: Likes both sexes

Bipolar: see binary.

Bit: computers term, as in "my computer cost me a bit."

Boot: what normal people give you when you talk computers.

Bubble Memory: "bubble-head".

Chips: crunch edibles favored by compuholics - so they don't have to leave their keyboards for meals.

Closed Loop: old termination device, still popular in Iran today.

Cursor: Expert on four-letter words.

Disk: goes out in your back if you bend over a keyboard all day.

Error: first visit to a computer store.

File: where computer work checks in and checks out - except when it disappears.

Floppy: your stomach after too much junk food (see chips) and not enough exercise. ***(SEE DICK DECH)***

Hardware: lawnmower, rake..any equipment you've ignored since getting a computer.

IBM: Your family would like to drop one on your computer.

Interface: opposite of "getoutamaface'.

K: a constant used in employment ads to obscure how much pay they are offering.

MegaHertz: bigger car rental company.

Menu: forget it -compuholics can't afford restaurants.

Monitor: what the FBI does to your phone data-line when your bank balance increase with every check you write.

Network: an occupation of fisherfolk.

Program: mental help procedure for compuholics.

RAM: male sheep.

Real Time: here and now, opposite of now and then.

Return: what some do with their computers after one week.

ROM: RAM, after an operation.

Semiconductor: part-time and leader.

Software: silk nighties, etc. etc., opposite of hardware.

Terminal: place for buses or trains.

Transistor: opposite of transbrother.

Vacuum Tube: similar to "bubble memory" (derogatory)

Window: what you heave your computer out after it loses three days of your work.

from the "Amador County ARC Newsletter and ARCS News, via June '92 Sacramento ARC "Mike and Key"

Student Bloopers with Pullet Surprises

supplied by Dave, WD5BRP

o Having one wife is called monotony

o When a man has more than one wife, he is a pigamist

o Acrimony is what a man gives his divorced wife

o Each Thanksgiving it is a tradition for my family to shoot peasants

o Reversing a g and q, a young man once wrote, "When a boy and a girl are deeply in love, there is no quilt felt between them."

o When there are no fresh vegetables, you can always get canned

o It is bad manners to break your bread and roll in your soup

o A passive verb is when the subject is the sufferer, as in "I am loved."

o The amount of education you have determines your loot in life

o Last year many lives were caused by accidents

o Heredity means that if your grandfather didn't have any children, then your father probably wouldn't have any, and neither would you, probably.

author unknown

Tall Tales - DARK SUCKER THEORY

CREDITS

The following was copied from the AMA National Newsletter, Dec. 1989, who copied it from the AMES Sundusters club newsletter, Denny Goodrich, Editor, Ames IA. Author unknown.



This document was forwarded to a reputable university in Longview, Tx, by a noted dark scholar from Kilgore, Tx. We thank John Niesner for forwarding the current pool of knowledge to us so we could research and expand the theory to a more credible position. Certain issues not addressed in the original theory have been added by university staff. Additionally, further research has found
further proofs supporting the original thesis, and has been included also.

DARKNESS, BE GONE (Revised April, 1990)

For years it has been believed that electric bulbs emitted a substance or energy called light. Recent information, however, has proven otherwise. Electric bulbs don't emit light - they suck dark. Thus we call these bulbs dark suckers. In addition to proving this fact, the Dark Sucker Theory also presents a number of other basic theorems concerning the properties of dark.

For example, the speed of dark is greater than that of light, and dark has greater mass than light.

The basis of the Dark Sucker Theory is that electric bulbs suck dark. Take for example, the dark suckers in the room where you are. There is less dark right next to them than there is elsewhere. The larger the dark suckers, the greater its capacity to suck dark. Dark suckers in a parking lot have much greater capacity than the ones in this room. As with all things, dark suckers don't last forever. Once they are full of dark, they can no longer suck.

This is proven by the black spot on a full dark sucker. A candle is a primitive dark sucker. A new candle has a white wick. You will notice that after the first use, the wick turns black, representing the dark which has been sucked into it. If you hold a pencil next to the wick on an operating candle, the tip will turn black, because it got in the way of the dark flowing into the candle. Unfortunately, these dark suckers have a very limited range.

There are also portable dark suckers. The bulbs in these units can't handle all of the dark by themselves, and must be aided by a dark storage unit. When the dark storage unit is full, it must be either emptied or replaced before the portable dark sucker can operate again. If you break open one of these filled canisters, one will see that there is indeed a great quanity of stored dark on the inside.

Dark has mass. When dark goes into a dark sucker, friction from this mass passing through another mass will generate a certain amount of heat. It is commonly known that an operating dark sucker generates heat. The dark suckers with the greatest capacities force the dark to travel through the impeding mediums at greater rates of speed, so they develop greater amounts of heat.

Thus, it is not wise to touch a operating dark sucker. Candles present a special problem. Though the light does not have to travel through a solid substance like the glass forming an electric bulb, the dark must travel into the solid wick, instead of a void as is found inside of the bulb. As we all know, this process generates a great amount of heat. In fact, flammable items
which come into contact with an operating candle will be set on fire because of the amount of heat generated. Thus, it can be even more dangerous to touch a operating candle.

Further proof of dark's mass is illustrated by the smoke generated by inefficient or extinguished candles. The intermediate state of dark during its destruction is a visible soot or smoke. Once again, casual observers will attempt to refute the mass of darkness since smoke generally rises. The same physical laws which allow clouds to float, when water is heavier than air, cause smoke to rise. In an uncleaned area, it is easy to note the "rain" of soot which accumulates on surfaces.

Though many are not aware of the incredible technology behind candles, they illustrate another one of the many characteristics of dark. Consider the fact that dark suckers absorb and store light. At first glance, it may seem that this fact is a childish myth since an operating candle eventually diminishes to nothing. Proponents of this argument fail to realize that the candle is actually destroying the dark which it sucks! Why then, does a room full of dark not become empty of dark after a while? Simple, dark is capable of regenerating itself. It is important to note that the speed of regeneration is proportional to the volume of dark already present. For example, in a closet where the volume is small, the candle will be able to suck dark faster than the dark reproduces itself. In a huge cavern, however, a candle will not
be able to keep up, thus we need dark suckers with greater capacities when we use them in large spaces.

Further support for the destruction of dark is illustrated by the previous reference to dark storage units. Though most inexpensive storage units will get full, and therefore become useless, the higher priced ones can be attached to a charger which empties the canister by destroying the dark inside. The canister is then able to be used again.

Dark is also heavier than light. If you swim just below the surface of a lake, you will see a lot of light. As you swim deeper and deeper, you notice it gets slowly darker and darker. When you reach a depth of approximately fifty feet, you are in total darkness. This is because the heavier dark sinks to the bottom of the lake and the lighter light floats to the top. This immense power of dark can be utilized to man's advantage. We can collect the dark that has settled to the bottom of lakes and push it through turbines, which generate electricity and help push dark to the oceans, where it can be safely stored. Prior to turbines, it was much more difficult to get dark from the rivers and lakes to the oceans. The Indians recognized this problem and tried to solve it. When on a river in a canoe, traveling the same direction as the flow of dark, they paddled slowly, so as not to stop the flow of dark; but when they traveled against the dark, they paddled quickly, so as to help push the dark along its way.

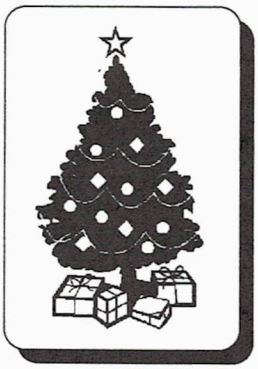
Finally, we can and must prove that dark is faster than light. If you were to stand in an illuminated room in front of a closed dark closet then slowly open the closed door, you would see the light slowly enter the closet; but since the dark is so fast you are not be able to see the dark leave the closet.

In conclusion, I would like to say that dark suckers make all our lives much easier. So, the next time you look at an electric bulb, remember that it is a indeed a dark sucker.

W3OK Christmas City

Special Event Station, 1993

by Bob, KE3AW



The club station will be humming with activity on Saturday, December 18, and ~~Saturday~~ Sunday, December 19. On those two days, 9 am to 9 pm local time on both days, DLARC members will operate the traditional Christmas City Special Event Station from the twin Christmas Cities of Bethlehem and Nazareth.

Operate an hour or longer at our Gracedale location during this special event. Stations that work at our W3OK Special Event Station and send a SASE will receive a Special Event Certificate. Club members who participate by working at the W3OK club station will also receive a special certificate.

We've notified ***QST, CQ, 73, World Radio,*** and ***Radio Fun*** about this season's special event station. We are looking for a busy, interesting, fun time, often on the receiving side of a pile-up.

If you want to operate the station in this special event, sign up at the November DLARC meeting or contact N3IGA or me. We will be happy to put you on the schedule. You may wish to work single op or with other operators. If you have any questions, or if you aren't quite sure what this special event station is all about, give a call. Members who worked the event in past years can tell you about the fun they had. Spread holiday spirit. Operate the W3OK Christmas City Station!

de Bob, KE3AW

NOTE NEW MEETING LOCATION FOR NOVEMBER MEETING

This meeting on November 4th will, as usual ,be held at the Northampton Community College but will be held in the **West Plaza Room 292.** This is accessed by going into the Northampton Hall going across the overpasss towards the cafeteria and into Room 292.

Talk in of course will be on 146.70..and the meeting will start at 7:30 PM.

VE Report for October

by John, WX3C

At the VEC session at Gracedale on October 3, 9 candidates took 15 elements. There were 4 new Tech's, 1 Tech with HF and 1 new novice.

The new Tech's are

Francis S Janoski;

Jeffrey L Keller;

James A Woof

Robert C Yankovich.

The Tech with HF is **Jeffrey H Korr.**

The new Novice is **Louisa A Morgan.**

The VE's at this session were: WU3T, Ed; N3EBH, Tom; KE3AW, Bob; N3MHW, Walt and WX3C, John.

The next testing will be on **Saturday, October 30** for the ARRL National VEC day. All VE's are welcome to assist at this unique event.

The next scheduled test at Gracedale is **November 5** at 7:00 pm. Team 4 will attend.

73 de John, WX3C team liason.



JUST THOUGHT YOU MIGHT LIKE TO SEE HOW YOUR EDITOR FEELS WHEN IT GETS CLOSE TO W3OK CORRAL DEADLINE

If you visit Philadelphia make sure you stop at the Franklin Institute and see the great amateur radio setup there by the Philmont Mobile Radio Club. You can enjoy the station, tha rest of the family can see the other sights there.

Nice to Hear

Follows a letter, from Mike Chaffier, N3NEJ and his experiences with the Larsen Antenna Company:

In July of this year, I ordered a dual band window mount antenna from Ham Radio Outlet in Virginia. This was a 2/70 manufactured by Larsen. Upon arrival, I immediately proceeded to install same on my wife's van.

Included in the installation instructions was a vial of adhesive, or similar compound, which was totally evaporated. Being the expert that I am, I assumed the installation would still be a good one without this compound. Naturally I was wrong. A couple of hours after installation, during which I totally enjoyed the efficiency of this 2/70, the outside section of the antenna departed the vehicle somewhere between the west end of Allentown and my home in Bethlehem,

All of the above was probably a combination of factors, not excluding my possible poor procedures.

A telephone call to Larsen Antenna Company in the state of Washington resulted in a fantastic response to my dilemma. Since I was reluctant to spend approximately $90.00 a second time, I presented my situation to the wonderful, friendly female voice on the other end and, much to my over enjoyment, she said, "No Problem, we'll ship another section to you for the cost of the freight.

The replacement arrived too late for me to use on my vacation, but I am now currently using it with my HT along with a dual bander that I purchased at Radio Shack t use as a back-up.

Our more than 400 members of DLARC might like to know that there are some manufacturers who will stretch more than enough to maintain the respect of a solid customer base.

73, Mike, N3NEJ

IF YOU HAVE A STORY RELATED TO HAM RADIO, WHY NOT WRITE IT FOR THE NEXT ISSUE

The Origin of "73"

This account by L.R. Moreau first appeared in the SPARK GAP TIMES, the journal of the Old Timers Club of the USA. I feel it might help put an end to the "73's," "Very best 73's," and :Seventy-thirds" used on the bands by "them wot don't know no better"



The traditional expression **"73"** dates from early land-line telegraph days. You can find it in the earliest editions of the "numerical codes," with definitions that the end or signature, was coming up.

The *National Telegraphic Review Operator's Guide,* first published in April 1857, shows **"73"** meaning, "My love to you"! Succeeding issues continued to give this definition. Yet some of the other numeric codes in use back then had the same meanings as today.

Before long, the meaning of **"73"** drifted away from "My love to you." Another publication, *The National Telegraphic Convention,* defined **"73"** as a vague sign of fraternalism--Just a friendly greeting between operators, It was so used on all wires form many years.

In 1859, the Western Union Company set up the "92 Code," a list of numerals from 1 t 92 that referred to a series of prepared phrases for use on the wires. In the 92 Code **"73"** changes from a fraternal sign to a flowery "Accept my compliments"--in keeping with the florid language of the era.

Telegraphy manuals published between 1859 and 1900 show variations of this more straightforward meaning. Dodge's *The Telegraph Instructor* shows it as "compliments," but Theodore Edison's *Telegraph Self- Taught* reports a return to "accept my compliments." Finally, a 1908 edition of the Dodge manual gives today's definition, "best regards" though a backward look in another part of that work also lists "Compliments."

"Best regards" has remained the literal definition of **"73"** ever since, but more recently **"73"** has re-acquired overtones of a warmer meaning. Amateurs use it today as James Reid intended so long ago--as a friendly word between operators.

from the ARNS Newsletter May 1993 reprinted from the Southwestern Virginia Wireless Assoc. March'93 "Groundwave". Editor WA4BKW. Submitted by G3ATH

NOBEL PRIZE WINNER ATTRIBUTES SUCCESS TO HAM RADIO

from ARRL Special Bulletin 21

The winner of the 1993 Nobel Prize for Physics, Princeton University's Dr. Joseph H. Taylor, K1JT, attributes his success in science to his early involvement in amateur radio, according to published news accounts.

Taylor, who shared this year's award with his former student and current Princeton colleague, Dr. Russell A. Hulse, told reporters that he developed his scientific skills as a ham while a student at Moorestown Friends Academy in New Jersey.

Taylor earned a Bachelor's Degree from Haverford College in 1963 and a Doctorate in Astronomy from Harvard University. The Nobel Committee awarded this year's physics prize to Tay-
l
or and Hulse for their study of the gigantic gravitational forces exerted by pulsars. Their results are thought by scientists to confirm many of the predictions of Einstein's general theory of relativity.

** Contest Calendar**

by Barrry, KU3X, Contest Editor

Nov 6-7	ARRL CW Sweepstakes
	ARRL International EME Competition
	RAC QST QSO Sprint
Nov 9	W1AW Qualifying Run 10-40 WPM
Nov 13-14	Worked All Europe RTTY Contest
	OK DX Contest
Nov 20-21	ARRL SSB Sweepstakes
	Ukrainian DX Contest
Nov 27-28	CQ WW DX SSB Contest
	W1AW Qualifying Run 10-35 WPM

CONTEST TIP #18

CW full breakin: This can be a very good tool if you are comfortable with CW. You can listen between every dit and dah to see if anybody is creating and QRM on your transmit frequency. In pileups, you know exactly when to stop transmitting. A 48 hour contest is very tiring. One disadvantage with full breakin is that you never get to give your ears a rest. This can be a great tool but full breakin is not for everybody.

de Barry KU3X



LICENSE EXPIRATIONS:

According to the DLARC DataBase the following have license expirations coming up within the next three months:

W3APE.....01/24/94
K3BKR.....12/20/93
N3DSP.....01/13/94
WB3IFV.....01/17/94
WA2TWS.....01/27/94
W2CCE.....02/10/94
W3IKB.....02/03/94
AJ3H.....02/03/94

Emmaus Halloween Parade

by Carl, KA3TEQ



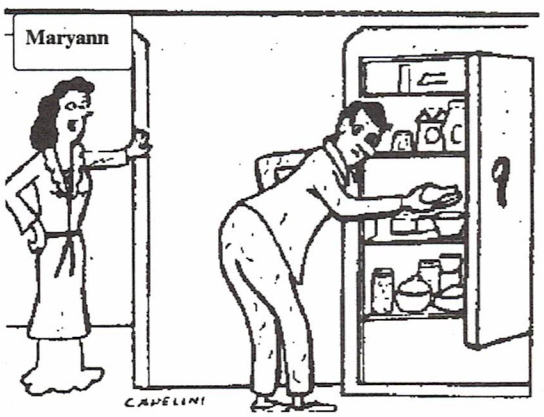
On October 16th Members of the DLARC participated in the Halloween Parade for the Borough of Emmaus

As usual, member acted as Safety Communications. Participating were:

Carl Ettl, KA3TEQ ; Paul Eline, KA3MTY, David Hinkel, N3GRH; Rick Kromer, AI3D, Ray Bilger, W3TDF; Mark Miller WA3KIF; Paul Ryan, N0KIA, Bob Kratz, KU3K; Bruce Navarre, KA3TIU; Bob Greeen, KE3AW; Bill Fahs, NC3P, John Paulus, N2MWQ, Tom Dow N3EBH and Leo Kehs, KA3TMR.

DOINGS OF DICK DECH

I



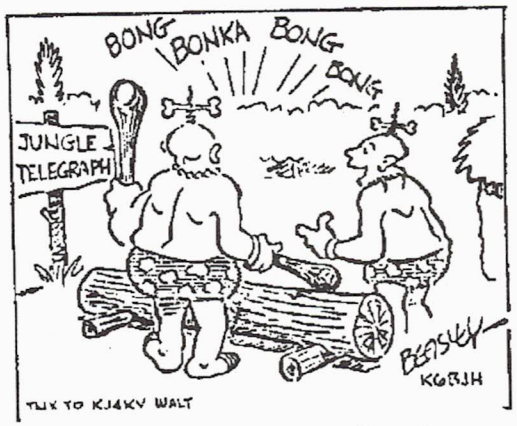
Dick, you're mother told me she stopped your 2:30AM feeding 46 years ago.

How to Sound Like a Lid

by Rusty Bumpers, N4LID

Part 1

On two meters lately, I have noticed a tendency of people making a concerted effort to sound like a Lid (i.e. poor operator). Since this appears to be the new style in amateur radio, I thought I would present this handy guide to radio nerd-dom. The following is what I call: "How to sound like a Lid in one easy lesson."



He Says "Ill See you Further down the Log"

Use as many Q signals as possible. Yes, I know they were invented solely for CW and are totally inappropriate for two-meter FM, but they're fun and entertaining. They keep people guessing as to what you really meant. i.e. "I'm going to QSY to the kitchen." Can you really change frequency to the kitchen? QSL used to mean "I amacknowledging receipt," but now it appears to mean "yes" or "OK." I guess I missed it when the ARRL changed the meaning.

Never laugh, when you can say "hi hi." No one will ever know you aren't a long time CW ragchewer if you don't tell them. They'll think you've been on since the days of Marconi.

Utilize an alternative vocabulary. Use words like "destinated" and "negatory." It's OK to make up your own words here. "Yeah Bill, I pheelbart zaphonix occasionally myself."

The better the copy on two-meter FM, the more you should phonetically spell your name, especially if it is a short and/or common one. i.e. "My name is Al...Alpha Lima" or "Jack...Juliett Alpha Charlie Kilo." If at all possible, make up unintelligible phonetics. "My name is Bob...Billibong Oregano Bumperpool."

Whenever possible, use the wrong terminology. It keeps people guessing. Use "modulation" when you mean "deviation" and vice-versa. And even if the two-meter FM amplifier you're using is a Class C type amp, and thus not biased for linear amplification, be sure to call it your "linear." Heck, refer to all FM-style amplifiers as "linears." You'll be king of the "wrong terminology" hill.

If someone asks for a break, always finish your turn, talking as long as possible before turning it over. Whenever possible, pass it around a few times first. This will discourage the breaker and, if it is an emergency, will encourage him to switch to another repeater and not bother you.

Always ask involved questions of the person who is trying to sign out. Never let him get by with a yes or no answer. Make it a question that will take a long time to answer.

The less you know about a subject, the more you should speculate about it on the air. The amount of time spent on your speculations should be inversely proportional to your knowledge of the subject.

If someone on the repeater is causing interference, you should talk about that person at great length, making sure to comment on at least four out of six of the following: (1) His mental state; (2) His family; (3) His intelligence, or lack of same; (4) His sexual preference; (5) His relationship to small animals; (6) His other methods of self entertainment.

If you hear two amateurs start a conversation on the repeater, wait until they are 20 seconds into their contact, and then break-in to use the patch. Make sure that it's only a simple routine phone call. It's also very important that you run the autopatch for the full three minutes. This way, once the two re-establish contact, they won't even remember what they were talking about.

You hear someone on the repeater giving directions to a visiting amateur. Even if the directions are good, make sure you break-in with your own "alternate route but better way to get there" version. This is most effective if several other Lid trainees join in, each with a different route. By the time the amateur wanting directionsunscrambles all the street names whizzing around in his head, he should have mobiled out of range of the repeater. This keeps you from having to stick around and help the guy get back out of town later.

Use the repeater for an hour or two at a time, preventing others from using it. Better yet, do it on a daily basis. Your quest is to make people so sick of hearing your voice every time they turn on their radio, they'll move to another frequency. This way you'll lightenthe load on the repeater, leaving even more time for you to talk on it.

Continued in Part 2

How to Sound Like a Lid

Part 2

See just how much mobile flutter you can generate by operating at handheld power levels too far from the repeater. Engage people in converations when you know they won't be able to copy half of what you're saying. Even when they say you are uncopyable, continue to string them along by making further transmissions. See just how frustrated you can make the other amateur before he finally signs off in disgust.

Give out wacky radio advice. When a newcomer's signal is weak into the repeater, tell him he can correct the problem by adjusting the volume and squelch knobs on his radio. Or tell people they're full quieting except for the white noise on their signal. Or....well, you get the idea.

Use lots of radio jargon. After all, it makes you feel important using words average people don't say. Who cares if it makes you sound like you just fell off of Channel 19 on the Citizen's Band? Use phases such as "Roger on that," "10-4," "I'm on the side," "You're making the trip," and "Negatory on that."

Use excessive microphone gain. See just how loud you can make your audio. Make sure the audio gain is so high that other amateurs can hear any bugs crawling on your floor. If mobile, make sure the wind noise is loud enough that others have to strain to pick your words out from all the racket.

Be as verbose as possible. Never say "yes" when you can say "He acquiesced in the affirmative by saying 'yes'." (No kidding, I actually heard that one.)

Start every transmission with the word "Roger" or "QSL." Sure, you don't need to acknowledge that you received the other transmission in full. After all, you would simply ask for a repeat if you missed something. But consider it your gift to the other amateur to give him solace every few seconds that his transmissions are being received.

When looking for a contact on a repeater, always say you're "listening" or "monitoring" multiple times. I've always found that at least a half dozen times or so is good. Repeating your multiple "listening" IDs every 10 to 15 seconds is even better. Those people who didn't want totalk to you will eventually call you, hoping you'll go away after you have finally made a contact.

Give out repeater FM signal reports using the HF SSB R-S system ("You're 5 by 9 here"). Sure it's considered improper for FM operation and you may even confuse some people, but don't let that spoil your fun!

Always use a repeater, even if you can work the other station easily on simplex -- especially if you can make the contact on simplex. The coverage of the repeater you use should be inversely proportional to your distance from the other station.

If you and the other station are both within a mile or two of the repeater you are using, you should always give a signal report. ("I'm sitting under the repeater and I know you can see it from there, but you're full quieting into the repeater. How about me?")

In the same vein as the previous step, when monitoring a repeater, you should always give signal reports as if the repeater didn't exist. ("Yep, I'm right under the repeater. You've got a whopping signal. You're S-9 plus 60. That must be a great rig.")

On repeaters with courtesy tones, you should always say "over." Courtesy tones are designed to let everyone know when you have unkeyed, but don't let that stop you. Say "over," "back to you," or "go ahead." It serves no useful purpose, but don't worry -- it's still fun.

Think up interesting and bizarre things to do to tie-up the repeater. The goal here is not to facilitate communications, but to entertain all the scanner listeners out there. Do something original. Try to hum CTCSS (PL) tones. Sing pager tones. You're getting the idea.

Use the repeater's autopatch for frivolous routine calls. While pulling into the neighborhood, call home to let them know you'll be there in two minutes. Or call your spouse to complain about the bad day you had at work. After all, the club has "measured rate" service on their phone line, so they get charged for each autopatch call. Your endeavor is to make so many patches in a year that you cost the club at least $20 in phone bills. That way you'll feel you got your money's worth for your dues.

Note: This "Rusty Bumpers" column is from the May 1993 issue of "Solid Copy", the Richmond (VA) Amateur Telecommunications Society's monthly newsletter. Most of the examples used by "Rusty" have happened on the local repeaters exactly as written, although some of the items are exaggerated slightly for humor.

Supplied by George N3OWG

The drawing at top of this article from Newsletter Electric Radio

Digital Communications

by Joel, K9TBD

----part 1 of 2 ------

Digital Interview of WA9FIO



My brother Van, and I have had an AMTOR link going for about a year and I thought it might be interesting to interview him regarding his involvement with digital modes of communication. He has been digitizing for a number of years and has some insights regarding these fascinating modes. This interview was conducted on 20 meter AMTOR over a few day period and completed via E-mail on Internet when the band went.

'K9TBD:' how long have you been using digital modes on the amateur bands?

'WA9FIO:' Sure thing on the digital interview... ho.. well, lemme think here. I think I got a surplus model 19, back in 1967 or maybe 1968, when we lived in Denver. Got that hooked up in the basement, in a place that used to be the coal cellar. That little room was kinda neat, because what else could you do with a coal cellar but panel it with cedar shingles. That way the smell of the model 19 nicely oiled didn't matter. I built Irv Hoff's 'TTL' TU at that time, and later updated it to the ttl-2, with nice fancy tuning eye tube. worked great. mostly 80/20 meters... probably the model 19 is still running, though I cant remember where it is now.. so thar ya go ------ 21:13 UTC 08-Oct-1993 ------

'K9TBD:' What states/countries could you work from your denver coal cellar? (I remember the tuning eye-Irv/Hoff tu) this is all going into the buffer.

'WA9FIO:' What states etc? Well I think I worked about every thing in the world. Late 60's were good sunspot years, and it was anyone in this country on 80 meters at night, and anyone in the world on 20 during weekend days. mostly Europe and the vk's though for there were not many rtty'ers then. South America of course..

'K9TBD:' What digital modes have you used over the years? Which are your favorites?

'WA9FIO:' Which modes. RTTY at first. 850 shift then, which rapidly became 170 shift. AMTOR when it first came in to being with a c-64, and an aea cp-1. VHF packet later, and pactor for about the last half year. I still prefer amtor for keyboarding, because its keyboard rate matches my typing, and it is a little more graceful when it fails.. I have kinda given up on vhf packet, though i build a lotta nodes that still have my call on them..

'K9TBD:' Signals are still hold - nope they went. Yup sigs went - I will save my buffer and we can add to it later on over the next few days. I will transcribe what I have to this point on Internet and send you a mail message.... this is neat. **WA9FIO de K9TBD** sk sk sk 73 ------**WA9FIO** de K9TBD-----2125 ut------

Interview continued via E-mail on Internet.....then finished via AMTOR.

'K9TBD:' What do you think of lowband packet?

'WA9FIO': Hmmm, well simply put, it is not a very good engineering compromise, and not a very useful mode to work DX with or just have a plan QSO, or even pass routine traffic reliably. I have developed some of my own observations on HF digital modes that have a written support in some of the theoretical work on digital microwave links. It goes like this: Selective fades, channel width, bit error rates and my own term BIT-ENERGY/BAUD.

Long ago, shift widths were reduced from 850 to 170 hz to get around the major problem of frequency selective fades on HF. About 200 hz FSK is the widest shift you can practically use. (meaning occupying 200 hz bandwidth, not the static mark and space frequencies) 300 baud packet actually occupies about 500 hz. Then you get phase and selective amplitude errors on any HF path. This does not include adjacent channel noise or actual QRM, which only degrades any 300 baud/200 hz shift channel even more. You wind up with about one bit error rate on an ordinary good quality 20 meter frequency of about 1/200 bits. (not bytes) This means that on a good channel only short data packets will get through, and if anything else occurs, packets will be endlessly repeated. Furthermore the cycle length of a packet burst is too long. Most of the forwarding HF stations are using very high power. This assumes that you have the most optimum receiver input bandwidth, perfect decoding in the TNC.

So, for simple bit-energy/baud example. Assume for the simple RTTY case that you have a 100 watt station, running optimally at 50 baud, entirely contained in a 200 hz band width. You get 2 watts/baud. Now for example a 100 watt station, 300 baud, occupying 500 hz bandwidth. You get 100/300 * 200/500 or 2/15 watt per baud. In order to get the same bit error rate on the receiving end, you gotta QRO up to 1500 watts. Now you are spending real money, and generating some important TVI.

----------73, Bro.

de Joel, K9TBD

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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--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
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