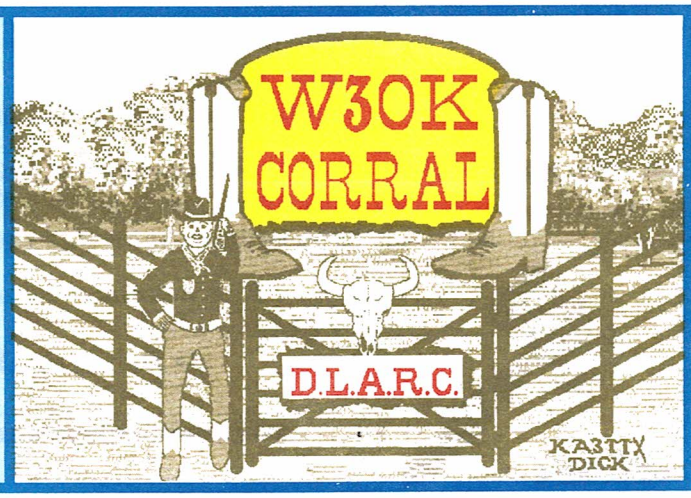
DELAWARE - LEHIGH AMATEUR RADIO CLUB, INC. W3OK

October 1994



SPECIAL SERVICE CLUB

ARRL Affiliated Club

BOY, DOES MY GIGA HURTS

And you think packet radio is fast!!!

by Greg, KB2ANG program chairman

This months meeting on September 6, will feature Dr. Dennis Silage, WB2LGJ, ARRL Technical Coordinator for Eastern Pennsylvania since 1992.

Dennis, is Professor of Electrical Engineering at Temple University, MSE, and Ph.D. from University of Pennsylvania will be demonstrating **10Ghz Digital communications system.**

Dennis will be demonstrating a senior design project by John, WA3KEN and Tim N3CZV. Other "ham" communications projects were award winners: IEEE Bendix Award (Mid-Atlantic Section) and a) AMSAT Tracking Microcontroller 1988 b) Doppler Shift Correction for High Speed Digital Communications through AMSAT 1989. Current EE design this year is "spread spectrum communications hardware.

Dennis has held the calls WB3AYR and G5EMU, and is trustee of the Temple University Amateur Radio Club. The club has about 20 members, with 2 high frequency stations, RTTY, AMTOR, PACKET and all mode operation on 144 and 440 MHz.

Come see what really high speed communications are possible.

This meeting will be held at the Bethlehem Area Vocational Technical School, not at Northampton Community College as usual. The meeting will begin at 7:30 with election of officers and then the program. Talk in on will be on 146.70.

Meeting location

Take Rt 22 East or West, turn South onto 191. Follow 191 for 6 tenth miles to stop light. At stop light, turn left on to Oakland road. Follow Oakland rd for 8 tenth miles to four way stop sign. At stop sign, turn right onto Hecktown rd. Follow Hecktown road. for 4 tenth miles to Chester Ave.. Turn right on to Chester Ave.. Follow Chester Ave.. for 1 tenth mile, you will see Votech parking lot.

From Newburg, south on 191 to Butztown Rd. Turn left onto Butztown Road. to the four way stop sign. Stop for stop sign, proceed through stop sign. This is Hecktown road. you are on. From the four way stop sign, you are 4 tenth mile to Votech. Turn right onto Chester ave for 1 tenth mile to Votech parking lot.

Slate of officers:

Van, K3CP, Chairman of the Nominating Committee presented the following slate of Officers for 1994-1995:

President: Bob Green, KE3AW
Vice Pres.: Tom Frobase, N3LLL
Secretary: Bob Gerst, N3OLH
Treasurer: Dick Dech, KA3MOU

For the Executive committee, **5** are to be elected, the Committee proposed the following:
Ray Bilger, W3TDF Joe Brue, N3MKZ
Don Curtis, W3LR Bob Dickenson, W2CCE
Chris Hornaman, NU3L Bob Kratz, KU3K

The Prez Sez

by Bob, KE3AW

We have over 450 members. We are one of the bigger amateur radio clubs in the country. As you may have noticed, we have often added upward of 10 members per month. Yes, we are happy for all the members, but membership should be more than just joining the club. It should be an opportunity to link with elmers and develop good radio operating skills.



What I am addressing is not limited to 2 meter operation and repeater etiquette. It is also about operation on the HF bands.

As an example, annually Ray, W3TDF, has encouraged and supported DLARC's participation in the PAQSO Party. At the last club meeting Ray presented hints on the PAQSO Party operation that can help DLARC win the PAQSO Party again this year. He showed ways of operating that can chalk up maximum scores. He addressed hand-logging and computer logging. A fine program by Ray! These tips are helpful, as refreshers, or as new information to beginners.

Let's not stop there. This is a great time for the new and maybe bewildered beginners in the hobby to see what HF operation is about. Can you open your station to an interested beginner?

Whether it's putting up antennas, tuning the rig for optimum conditions, or operating, if you have operated an HF station, you can be a very helpful elmer.

Or if you are a member who is bewildered, or at least curious about HF, and you want more experience before working on your own -- or if your personal license class does not permit HF operation just yet until you upgrade -- nothing forbids you from visiting a station preparing for an event or operating. PAQSO Party time is an opportune time to see some HF action.

Since the club meeting will be only two days before the October 8-9 PAQSO Party, making connections between members at the meeting on the 6th may not be easy, time-wise. If you are interested in being an elmer, or linking with an elmer, please call any of the Executive Committee listed on the W3OK Corral cover. Do it now! We will try to give you some possibilities to see some HF station preparation and operation!

Let's capitalize on the size of our club. Let's use activities, such as this PAQSO Party as a link of the veteran hams and those new to the hobby.

And let's have some fun again in this year's PAQSO Party!

de Bob, KE3AW, president DLARC

Picnic great success

by Jeff, N3QZT, chairman

The annual DLARC picnic was held on August 21st at Hacketts park in Easton The event was attended by approximately 80 DLARC members and their families



The rains held off till late in the afternoon and did not bother the picnic for the most part. Corn on the cob was provided by Ray W3TDF and was very good. Liquid refreshment was arranged by Bob KB3RI.

Other Items on the menu included hot dogs and hamburgers, potato salad and macaroni salad, also many kinds of cakes and other deserts were brought by other club members. I would like to thank all those who helped in making the picnic happen, including Bonnie N3SWA, who provided games for the kids (they were great) and George N3OWG for setting up his QRP station and providing a little friendly competition. Horse shoes and Quoits were provided by Ray W3TDF (As I understand the competition in the horse shoe games was very intense) and Bill K3ANS brought a chess board.

Music was provided by Harry W3TEB Also thanks to Bob KE3AW for helping me pick up some of the items needed for the picnic. Thanks again to all who had a part in making the DLARC picnic a success. ***de Jeff N3QZT***

PA QSO PARTY OCTOBER 8th & 9th

"Lets not get loafy, lets keep the trophy"

de Ray, W3TDF

DLARC at Science Fest '94

Sunday, October 2

by Bob, KE3AW



DLARC is planning an Amateur Radio Demonstration with voice and digital transmissions, flyers about amateur radio, and a lot of intriguing discussions with people interested in what we do. Our demonstration will be part of the Science Fest '94 at the Bushkill Elementary School, Bushkill Township, Nazareth. It will be held from noon until 5 pm, Sunday, October 2.

We had a great time at the Nazareth Tech Expo a few months ago, and now we know more about what interest levels are. This demo station should be even better.

Interested? Contact Tom, N3LLL, or Bob, KE3AW. We would like to know the times you are available so we can have someone there all during the project. ***de Bob, KE3AW, president DLARC***

Mad Scientist Qualifying Exam:

Exam Questions #3

submitted by Rich, N3NXF

Last month's questions were a little tough, how did you do ? Let's try some easier questions this month. Good Luck !

21. The Earth is which planet from the sun ?

a. first
b. third
c. fifth
d. ninth

22. Stars are:

a. part of the solar system
b. meteors
c. planets
d. sun-like objects, very far away

23. The term relative humidity refers to:

a. the comfort zone on thermostats
b. the amount of moisture in the air
c. the amount of heat in the air
d. a weather front

24. An animal that is born with gills and then grows legs and lungs must be a:

a. mammal
b. fish
c. reptile
d. amphibian

25. Man's first visit to another heavenly body (the moon) was in:

a. a Mercury capsule
b. a Gemini capsule
c. Apollo 11
d. Apollo 13

26. The first two men to walk on the moon were:

a. Abbot & Costello
b. Armstrong & Aldrin
c. Collins & White
d. Glenn & Shepard

27. Which of the following substances is a mixture ?

a. pure water
b. salt
c. sea water
d. sugar

28. Rocket ships carry fuel and oxygen because:

a. they travel above the atmosphere
b. the get more speed that way
c. they need the added weight
d. they are better balanced

29. Which is not necessary to start a fire:

a. a combustible material
b. heat
c. matches
d. oxygen

30. Current (measured in amperes) is a:

a. flow of electrons in a conductor
b. unit of electrical pressure
c. unit of electrical energy
d. unit of electrical resistance

Answers To Last Month's Questions:

11. a 12. c 13. b 14. d 15. a 16. c 17. d 18. b 19. b 20. d

Answers to this test next month.

de Rich, N3NXF

Saga of a new ham

by John, N3NUE

A while ago I passed the test to join the world of "hammers"



So I could key my Icom up without fear of the slammer

I waited for the mailman's truck for the ticket I'd be reading

My wife said, "not another one!", where did they catch you speeding?

She said, "you got a call sign?", what's wrong with your first name?

You always spoke by phone before, things just won't be the same

What's that antenna on the house?, it looks like star wars here

You said that it would not be seen!, "I said at night, my dear"

So now our cellar is a shack, the game room has gone south

A Ten-Tec sits where guests once did, so i can use my mouth

The clothes line lies upon the ground, the posts are up, that's great

We now dry all our washables on Belden RG-8

My kids have seen me once this year when I came up for dinner

I had to make those QSO's, so i could be a winner

I used to sing around the house and give my family fits

But now i drive them crazy as I whistle dahs and dits

The hobby's not so bad, you know, I've learned a lot of things

My speech has gotten better and my code has taken wings

Although my bride has thrown me out, I'm reminded of a verse

Through thick and thin, in sickness, health, for hamming or for worse?

I'll make it up to her, I know, as well as family members

But, boy the bands are opening, is it getting near September?

So I apologize, my sweet, and if I can come back

I promise I will limit time to two nights in the shack

She asked me when I would arrive, from where I was now staying

"About an hour, darling, when my brother gets done playing"

(you see, he's got this rain gutter that's tuned for 80 meters and.....)

de John, N3NUE

Your ARRL Membership Benefits

QST, the monthly magazine is simply **THE SOURCE** of any topic that's part of Amateur Radio. Whether you're interested in contesting, DXing, or radio, accessories and antennas you can build at home, **QST** covers them all. In addition you have access to Technical Information Service, Ham Radio Equipment Insurance Program, Outgoing QSL Service, and Operating awards program.

Your **ARRL** membership helps fund the following services. You may use one or two of these services during your membershi0p, or you might take advantage of them all. As an **ARRL** member you insure their existence and continuation.

.Representation of your interests in Washington

.Regulatory Information Department providing information on:

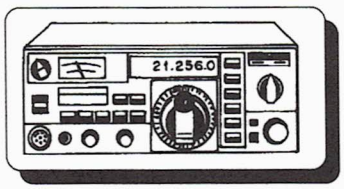
FCC/regulatory questions
Antenna/tower/zoning restriction problems
Reciprocal licensing procedures
Volunteer Counsel Program.
Volunteer Examiner Coordinator Program
Amateur Radio Emergency Service
Registered Amateur Radio Instructor program
W1AW code practice, bulletins and code proficiency sessions.
ARRL sponsored contests

TO JOIN OR RENEW YOUR MEMBERSHIP IN ARRL CONTACT DICK, KA3MOU, TREASURER . DLARC BENEFITS FROM THIS..

Radio prices going up

from the Radio Amateur Newsline

If you have been planning on buying a new piece of ham gear that is made in Japan, the Westlink Report ham radio newsletter says that now may be the best time. Not because dealers are having any kind of ham radio super sale. Rather it may be the only way to avoid what could be the biggest price hike in all Pacific Rim manufactured merchandise ever to hit the United States.



Most hams -- in fact most Americans are not aware that the cost of items manufactured outside of the United States is not directly measured in U.S. dollars. Rather, it is how much of another foreign currency a U.S. dollar will buy. When we talk-about most of today's electronics -- especially consumer electronics which includes most ham gear -- we are talking about the Japanese unit of currency called the Yen. Let's suppose that a piece of ham gear costs ten thousand Yen in Japan. A year ago, a United States dollar would buy about 125 Japanese Yen. Divide 10,000 Yen by 125 Yen to the dollar and you find that eighty United States dollars would equal the 10,000 Yen needed to buy that piece of equipment.

But as we go to air, the United States dollar has fallen to a new all-time exchange low. Currently a dollar will buy only about 97 Yen. So if we divide 10,000 Yen by 97 Yen to the dollar, the eighty dollar piece of ham gear now costs $103 United States dollars -- an increase of about seventeen percent. And these are what we call base price increases that do not take into account the upward cost of excise taxes and import duties levied on almost all imports. Nor does it cover the higher import duty, state and city sales taxes that you will have to pay. If you add in all the real world costs, the actual increase is probably closer to 19%.

Making matters worse is that the Japanese economy is in it's worst recession in modern times. Because of their economy is in a tailspin, the value of their currency is unstable. We won't go into the science of international money trading. But we will say that the Japanese Yen and United States dollar are changing value on a daily basis, with the dollar constantly sinking in relation to the Yen.

So the big question is when will the downward spiral of the dollar in relation to the Yen end? That is not an easy question to answer since the best minds in the world of global economics are divided on it. Some thought the spiral had ended last fall when the exchange rate hit 100 only to be shocked back to reality few weeks ago when 96 was the new record low. In other words, your guess is as good as the international money experts, and they are not venturing any real estimates right now.

from the Radio Amateur Newsline

A modern fable



Encouragement

by Ken, N7SQU

Whether we like to acknowledge it or not, most of need a bit of encouragement from time to time.

We need positive reinforcement because we continually find ourselves surrounded by people who are quick to tell us what we are doing wrong, while rarely mentioning what we are doing right.

The last thing a negative person would do is encourage us to go beyond what we expect of ourselves,m yet, most of us are capable of doing just that - with the right influences.

Years ago I met an old farmer who understood that. He cited his mule as a prime example.. When I asked him to explain he said, "Come out to the field and I'll show you." I did and I watched him put blinders on the mule and hitch him to a two-horse plow.

Then when he stood behind the plow and yelled, "Get up Will, get up John, get up Kate, get up Bill," the mule pulled that big plow.

"How many names does that mule have?", I asked.

"Just one," the farmer answered, "Pete". But when I call out the others names, he knows he has plenty of help, so he does the work of "two."

Original from the January-February '94 Kachina ARC (Show Low, Arizona) Kachina QSO-Judy Roush, AA7UC Editor and the July 1994 ARNS.

Repairing Ham gear -

Part 1

By Van - K3CP



Elmer and Ima Lidd have been discussing the operation of radio receivers in the last few sessions. Elmer thought that Ima was ready now for some lessons in trouble shooting. He also thought they should start by talking about the test equipment that would be necessary.

"One of the essential tools is a Voltmeter," Elmer said. "As its name suggests it measures volts. The voltmeter is often used with multipliers. A multiplier is a resistor connected in series with the meter to extend its range. Suppose you wanted to measure a voltage known to be around 100 volts and your voltmeter was a 10 volt one. One method would be to put ten 1000 ohm resistors across the unknown voltage. That would be a total of 10,000 ohms and 10 volts would appear across each one. So if you put your voltmeter across one of the resistors and it read 10 volts you would know that the total voltage was ten times that or 100 volts. In practice you would lump all the resistors together. Then you could switch other resistors in and out with a switch and measure mostly any voltage.

"There are two things to look out for in using multipliers. One is the accuracy of the resistors. The results can be no better than the resistors used. If they have a 5 percent tolerance then the readings will be accurate to 5 percent. In the above case that would mean that the reading could be off up to 5 volts. If you used 1 percent resistors you could count on 1 percent or 1 volt accuracy. The next thing to consider is called the loading effect on the circuit. In the above example, the current drawn by the multiplier resistors is found by the ohms law formula for current

(I=E/R) or .01 amperes. This load will cause the 100 volts to drop to a lower value, depending on how 'stiff' the supply is. Now it's no longer 100 volts, so the measurement is in error by the amount of that drop. After you remove the meter and its multipliers the voltage returns to 100 volts."

"What you are saying is that you should use resistors having a very high value", said Ima Lidd.

"That's right, Ima," said Elmer. "Let's take the above example to extremes (sometimes a good practice in comparing two or more situations). If we put a dead short across the voltage source it would drop to zero. Now when we measure it our meter would read zero. But if we put an infinitely high resistance across it, the voltage would not be lowered at all. This time our voltmeter would give an accurate reading.

"There are two kinds of meters in general use today. One of them is called analog and the other is digital."

"Please let me interrupt, Elmer," said Ima. "What is the difference between analog and digital?"

"That's a common question," replied Elmer, "and I'm glad you asked. There are many ways to answer that but I like to explain the difference by giving an example. For instance, suppose you wanted to vary the voltage in a circuit. You could use a variable resistor known as a potentiometer (pot) or a series of fixed resistors selected by a 10 position rotary switch. The first system is an analog one, the second a digital. Another way of rating it, is with the analog method it is continuously adjustable while the digital one is only adjustable in steps depending on the number of positions on the switch. Let's look at another case. When you started school you were taught to count to ten on your fingers (a digital method so named because you used your digits). You could count any number from one to ten. But, to count in between numbers like 2 1/2 or 6 1/4 you used an analog method."

"Let me see if I understand," said Ima. "A digital system only uses precise whole units while analog can measure fractions and decimals. Is that right?"

"No, not exactly," explained Elmer. "You can measure decimals in the digital system by making each digital step a tenth or hundredth of a unit. Take a decade resistance box for example. If it consists of four switches you could use the first one for tenths of an ohm, the second for ohms, the third for tens and the fourth for hundreds. If each switch had ten positions (0 to 9) you could produce any resistance from .1 ohm to 999.9 ohms."

"Boy, I didn't know what was involved in making a voltage measurement," said Ima Lidd, "but I really understand it now.

Thank you, Elmer."

de Van, K3CP

The Hams of RF Platz

by John N3GLZ

I would like to thank the following DLARC members for volunteering at the base station radio at Musikfest, KE3AW (Bob), N3QZT (Jeff), N3HQE (Dave), N3OLH (Bob), WF3H (Bob), and KE3FF (Bob). We also had several non-hams as well as a visiting ham from the Philadelphia area KB2FF (Dick). I would also like to thank KE3AW (Bob), WF3H (Bob) and W3PYF (Clarence) for helping to advertise for me by referring needed volunteers.



As amateur radio operators, we usually possess communications skills for radio communication that are unmatched anywhere else.

Although the Musikfest operation did not use amateur radio

frequencies, the amateurs who operated the station showed a high degree of skill in handling a high volume of radio traffic in some rather stressful moments. The Musikfest radio system is a VHF high band business system consisting of several business radio frequencies. Most of the individuals you communicate with are Musikfest staff members or other volunteers who are working at the various Platzes (Places) at the festival. We handles lots of administrative radio traffic, security issues, emergency medical calls and general announcements (lost children, parents, dogs, wallets, musical instruments, etc.). This communication's system is an integral part of the festival and is in essence, the backbone behind what goes on at the entire event.

Because of the nature and volume of the work, it is very helpful to have some type of emergency communication's experience. It was great to have Dave (N3HQE) from Northampton County Communications to assist and offer input. Although I had worked for six years as an emergency communication's dispatcher in my younger years, it had been over ten years since I had last had my hands on a Motorola microphone. The other DLARC members who helped showed a high degree of communication's skill and definitely contributed to the success of the operation. If anyone would like to volunteer for next year's Musikfest, you may contact me at 610-435-3268 or drop me a message on packet: N3GLZ @ N3DPU.EPA. When scheduling volunteers, we will need to give preference to those who have emergency communication's experience at either Musikfest or elsewhere.

de John, N3GLZ

Omen's law

by Ken, W6NKE

Next month we will again, celebrate the birthday of the famous scientist, Professor Eswarld Omen. It was Professor Omen who developed Omen's law as applied to electronics.

1) Upon completion of an electronic project, apply power.

2) If there is no smoke or flames, that is a good Omen.

3) If smoke or flames appear, that is a bad Omen.

Reprinted from the Modulator, the publication of the Baltimore Radio Club, Bruce, W3UWV who credits the September 1994, World Radio.

Didja ever wonder...

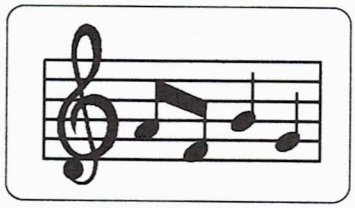
Why do you need a driver's license to buy liquor, when you can't drink and drive?
Why isn't phonetic spelled the way it sounds?
Why are there interstate highways in Hawaii?
Why are there flotation devices under airplane seats instead of parachutes?
Why are cigarettes sold in gas stations when smoking is prohibited there?
How does the guy who drives the snowplow get to work in the morning?
If a 7-11 is open 24 hours a day, 365 days a year, why are there locks on the doors?
If a cow laughed, would milk come out of her nose?
If nothing ever sticks to Teflon, how do they make Teflon stick to the pan?
If your vehicle goes at the speed of light, what happens when you turn on the headlights?
Why do they put Braille dots on the keypad of the drive-up ATM?
Why do we park on driveways and drive on parkways?
Why is brassiere singular and panties plural?
Why is it when you transport something by car, it is called a shipment, and when you transport something by ship, it is called cargo?
You know that indestructible black box they use on airplanes? why can't they make the entire plane out of the same substance?
Why is it that when you're driving and looking for an address, you turn down the volume on the radio? ***author unknown***

reprinted from The Blurb, publication of the Philmont Mobile Radio Club, Jack Haring, W3IIM, Editor,

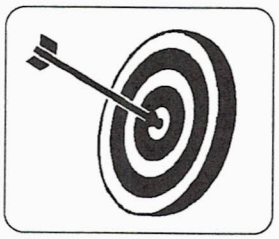
The Comeback, or How to Get Involved Again.

by John..... N3NUE

Having been involved in music as a hobby for most of my life, I took a long 13 year hiatus from playing out, or "gigging" as it's called in the business. My XYL noticed an advertisement in the local paper approximately. 4 years ago telling of a local roadhouse having an open mic. blues nite every Wednesday, all musicians invited to "jam" and show their stuff. Having been more than rusty and feeling like the Tin Man during monsoon season, I ventured out with harmonicas and portable piano in hand, more than a little nervous. After introductions and the usual "who did you used to play with" questions, I got up, played two or three songs, and sat down. I knew it had been a long time, and while I got a few "nice goings" and some sincere "you need to come here more" comments I did realize one thing. That this particular hangout was a **VERY FORGIVING PLACE.** They knew I was rusty and had somehow lost all my "chops", or technique, but no one ran up to launch me out the door. In the last four years, every Wednesday, I'm out there jamming with the best of them, and **LEARNING AT THE SAME TIME.** A free musical education all over again. Had those musicians and supportive people not been that kind, I would have given up, gone home, and started to oxidize once more



Now, the gist of the story is this. Ham Radio is also a very forgiving hobby, and the **DLARC** is a very forgiving club. While I myself have not made every meeting as I had originally planned, I knew that when I did show up there wasn't going to be a six page questionnaire to be filled out on where I had been. There was some good natured "busting" from my **ELMER** on where I've been hiding, and **RAY** probably knows, but I will say this: No one was upset, angry, or had that look in their eye like "Oh, YOU'RE back?" It was more like "good to see you again, how are things?" or "Will you be at the **HAMFEST** or picnic this year?" **THAT's** the **FORGIVING** part. We're all hams, we all do have other priorities sometimes, and this is a hobby in which we volunteer to take part. I myself knew that I promised that I would work security for the HAMFEST and that I should show up to find out what was happening, and I did...



So what's the point? The point is that if you are a member who hasn't gotten involved with the Club for any amount of time or for whatever reason; because of work, afraid technology has passed you by, haven't upgraded lately and might be reminded by your ELMER in front of everyone (yours truly) or are just plain nervous about not having shown up lately, **PLEASE** make it a point to **COME OUT** of hiding, **MEET SOME GREAT FOLKS**, get involved, reacquaint yourself with everyone or **VOLUNTEER FOR ONE EVENT PER YEAR AND START A TRADITION**. Truth be told we all got better looking while you were gone! But you do need to be here. The loss of your particular talent and gifts is the Club's loss as well. The first thing you'll receive is a handshake, a "what's your call" query if no one knows you, a smile, and it's all a cakewalk from there. This IS a forgiving hobby, and you CAN get involved from the beginning, or get involved AGAIN. Besides, where else can you get a free education from the experts in our Club while you work an event? No question too silly, no answer too complicated! Hey, look, if it's music, jam with the jammers. But if it's **HAM RADIO**, come **HAM** with the **HAM'ers** at the **DLARC.**

REMEMBER...the Club is **YOU!!** And don't worry, rustproofing is free once you hit the door. Your turn now, or....Dah dit Dah....

73 de N3NUE

For Sale

AEA, MM3 Morse Machine with power cube $125.00
Call Gil WB3ESR @ 838-6939 after 7:00 PM.

Susan's Quotations

One difference between genius and stupidity is that genius has limits. *_anonymous*

"Never" tempts fate. *_anonymous*

Everybody dies. The difference is what you do till then. *_anonymous.*

Phone Patches Revisited

by Don, W3LR

After reading the "Phone Patching" by WF3H, I reminisced about the days in South East Asia (Vietnam for some of us) when I had the opportunity to use ARMY Mars, Military Affiliate Radio, to make phone patches back to the states.. Believe me, "The Boys" really do appreciate that kind of service..



Back then we did not have Satellite Communication back to the states, we came close with "Tropo Scatter" links back to Guam and Okinawa. But that mostly carried priority communications.. You know ARMY stuff !!

The Hi Honey's I miss you was done over HF at all hours of the day and night, when propagation permitted.. I remember signals to be marginal back then, but any little bit was accepted and gratefully appreciated..

The one thing Bob did not bring to view in his article was that it is that phone patches are "NOT Permitted to everywhere"!

The following is a recently updated list of countries we (USA) has made "Third party agreements" with to permit phone patches to a third party in a foreign country.. You are party No. 1 and the ham on the other end is party No. 2.. Even a person in your shack is considered a third party. However, it is not much considered that way.

Countries sharing third-party traffic agreements

V2 Antigua/Barbuda	V6 Federated States of Micronesia
LU Argentina	
HP Panama	VK Australia
C5 Gambia	OA Peru
V3 Belize	9G Ghana
DU Philippines	CP Bolivia
J3 Grenada	V4 St Christopher/Nevis
T9 Biosnia-Herzegovinia	TG Guatemala
J6 St Lucia	J8 St Vincent
8R Guyana	PY Brazil
HH Haiti	9L Sierra Leone
VE Canada	HR Honduras
3DA Swaziland	CE Chile
4X Israel	9Y Trinidad/Tobago
HK Columbia	6Y Jamaica
GB Great Britain *	D6 Comoros
JY Jordan	CX Uruguay
TI Costa Rica	EL Liberia
YV Venezuela	CO Cuba
V7 Marshall Isd **	HI Dominican Republic
4U1ITU ITU, Geneva	4U1VIC VIC, Vienna
J7 Dominica	YN Nicaragua
HC Ecuador	YS El Salvador

* = Limited to Special-Event stations with callsign prefix GB (GB3 excluded) and informally to stations on Pitcairn Isd (VR6) ** The Marshall Isd's are independent, but FCC currently honors the previous agreement until a formal agreement can be made.

de Don, W3LR

** CONTEST CALENDAR **

by Barry, KU3X, Contest Editor

Oct 1-2 VK-ZL SSB Contest
RSGB 21/28 Mhz SSB Contest
Oct 5 West Coast Qualifying Run, 10-40 WPM
Oct 8-9 VK-ZL CW Contest
Oct 8-9 **Pennsylvania QSO Party**
Homebrew Fall Festival
Illinois QSO Party
Oct 10 W1AW Qualifying Run, 35-10 WPM
Oct 12-14 YLRL CW Anniversary Party
Oct 15-16 JARTS WW RTTY Contest
QRP ARCI CW QSO Party
RSGB 21/28 Mhz CW Contest
Oct 26-28 YLRL SSB Anniversary Party
W1AW Qualifying Run, 10-35 WPM
Oct 29-30 CQ WW DX SSB Contest
ARRL International EME

Competition

Exchanges

VK-ZL Contest = RS(T) + Three figure QSO number starting with 001

Illinois and PA QSO Party = RS(T) + QTH

YLRL Anniversary Party = QSO Number, RS(T), and QTH

CQ WW DX Contest = RS + Zone

de Barry KU3X

Results of the VE sessions. At DLARC Hamfest

by John WX3C, Team Liason

On August 14, the DLARC held 2 VE test sessions. The first one got underway at 10:30 a. m. The second began at 1:30 p. m. The results of the two are as follows:

48 candidates took a total of 64 elements. Earned were 1 Extra, 1 Advanced, 4 General's, 3 Technician plus and 11 codeless Technicians.

Those who earned the above included:

Lawerence J Thomas Jr, N3QVZ; Extra

Lawerence E Weinstein, N3STR; Advanced

Mark R Chessman, N3OWD; General

Howard Lamhut, N2VMF; General

Crystian Moszyk, KB2QZM; General

Francis E Lewandowski, KA3SJJ; General

Serkan Aksoz, KB2QOR; Technician Plus

Francis Vahey, N2VEX; Technician Plus

Peter Cole, (No call); Technician Plus

Roger A Nevers, (No call); Technician

Dennis D Dockey, (No call); Technician

James B Foust, (No call); Technician

Bobby J Petersen, (No call); Technician

Louis Campagna, (No call); Technician

Tyler N Boddie, (No call); Technician

Larry S Kahn, (No call); Technician

Stanton D Weinstein, (No call); Technician

Cheryl McLaughlin, (No call); Technician

Martin M Follmer, (No call); Technician

Douglas W King, (No call); Technician

The VE team at these 2 sessions did an outsatnding job.Those who served included: William VanHorn, K3CP; Michael J Rehal, KE3MU; Robin Moseley, WA3T; Chris Hornaman, NU3L; Rick Talbott, N3MHW; Greg Cowchuck, N3MTU, a member of Frankford Radio Club and John Greenage, WX3C, team liason.

Jamboree on the air 1994



by Dave, WD5BRP

After you have made all those contacts in the PA QSO party or if you missed it this year maybe you would like to show some Scouts what Amateur Radio is all about.

The 37th Jamboree on the Air takes place the weekend of October 15-16. If you would like to open your station to a few Scouts, both Boy Scouts and Girl Scouts. I'm sure the Scouts would have fun talking to other Scouts around the world. Our members of DLARC have provided this opportunity in previous years and opened up new adventures for Scouts.

In past years members have run the Club Station W3OK for this event, if your are interested in doing that, let me know as well.

It takes a little coaching to get these Boys and Girls talking on the radio. Once they start you may have to pull the plug to get them to stop, especially if you get some Boy Scouts talking to Girl Scouts in another corner of the globe. If you're willing to participate in allowing them to come to your station, just contact me and let me know the day and time and I will put you in contact with a Troop.

It doesn't take much on your part to get involved, just teach them how to use the mike and what they need to know about what the can and cannot talk about on the radio. There is a frequency list to get started on and I'll give you a copy if you need it. Call me or leave a message on packet at W3PYF-3 or WD5BRP-3. or phone at 253-3775.

Thanks for your support.

de WD5BRP Dave

Optimum ground systems For Vertical Antennas

by Dave Horn KK5I

A good signal on the lower HF bands can be a challenge. Our thinking normally runs to wire antennas. They are easy and inexpensive. The inherent problem with them, that few consider, is that they must be a half wave length in the air to be really effective. This takes something of substance to elevate the antenna.

The alternative is a vertical. Unfortunately they have received a bad rap because they require a radial system to work. RF stuffed into a vertical without one only produces heat in the ground. This is appreciated by the worms in the winter but does nothing for your signal. With a good radial pattern the vertical can produce the best long haul signal from a city lot.

There is more mystery and lack of information surrounding radials than any other aspect of antenna design. The general thinking is, "the more the better" or. "lots of short one are better than a few long ones." These rules of thumb will get you a signal on 75 meters but leave questions about. "how long", "how many", and "where is the point of diminishing returns?"

To answer these questions you need to know what radials do. They simply provide a low-loss return path for ground currents of the antenna. They are coupled to the actual ground by capacitance and conduction. Because they are coupled to ground, a resonate length is not important. Increasing radials increases coupling and thus efficiency. This is true for ground mounted verticals but not those mounted above ground. A ground plan, in the air, must have quarter wave resonate radials.

Optimizing a radial pattern requires matching wire placement with the location of RF ground currents. The currents are concentrated close to antenna and diminish with distance. Given the same over all length of wire, a greater number of shorter radials is more efficient than fewer longer ones.

According to broadcast standards, a perfect conducting ground requires 120 .4 wave radials. That's 48 wave lengths of wire! Anything less is a trade off between performance and effort and expense. The mystery is understanding the tradeoffs.

Power load and feed point impedance of a quarter wave vertical decreases and the efficiency increases as each wire is added to the radial system. Unfortunately your returns are diminishing almost immediately. Each added wire increases the efficiency less than the one before. You can spend a lot of time planting wire without appreciably changing your signal.

Fortunately John Stanley, K4ERO, summarized much of the existing broadcast industry radial research for amateurs. John was the chief engineer for a South American short wave broadcast network and avid contester. He developed the Table of Optimum Ground System Configurations. It has served as the Radial Bible since it was published in QST in December 1977. The basis of the table is his extensive extermination and industry publications.

The table lists six configurations and their results. Each is the next effective level of performance. It assumed average ground conductivity. If your lot is rocky or dry sand, you will have more loss than shown. On the other hand, if you're built on a salt water marsh, you will have less. Pick one that matches your pocket book and sweat index. Unless you increase wire to the next level, you are spinning your wheels.

As and example, consider a quarter wave vertical cut to 3800 khz. Double the old standby dipole formula to compute length. Use 936 divided by the frequency in Mhz. Configuration " A" calls for 16 25' radials for a 75 meter vertical. Unless you are up to increasing this to 24 at 31' don't bother.

Don't get hung up on a feed point impedance below 50 ohms. There are many ways to tune out any mismatch. The increased performance is well worth it. Also use lengths for lowest frequency with multi-band antennas.

There is nothing sacred about these distances or numbers. They are a guide. Real estate, wire availability and other factors will come into play. Remember everything is a compromise. YOUR optimum radial system must consider all of your unique factors.

This table works! Take my word for it. The 40 meter at field day was a configuration "A" and it received respect in a crowded band.

TABLE OF OPTIMUM GROUND SYSTEM CONFIGURATIONS

Configurations	A	B	C	D	E	F
Number of radials	16	24	36	60	90	120
Length of each in wavelengths	1	.125	.15	.2	.25	.4
Spacing in degrees	22.5	15	10	6	4	3
Total length of wire in wavelength	1.6	3	5.4	12	22.5	48
Power loss in DB at low angles	3	2	1.5	1	.5	0*
Feed point impedance in ohms	52	46	43	40	37	35

* Reference: The loss of this configuration is negligible compared to a perfectly conduction ground.

The above article was in the December 1993 issue of the Broken Arrow Amateur Radio Club newsletter Editor John Hutchison, N5QLV.

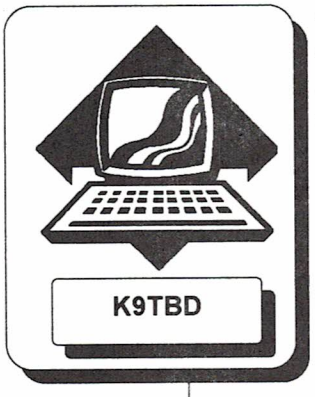
I found it very interesting and thought it was worth running in our newsletter. de Barry, KU3X

Digital Communication

by Joel, K9TBD

Standard Digital Radio Interface

My brother, Van, WA9FIO attended the 13th ARRL Digital Communications Conference in Bloomington, Minnesota during August 19-21, 1994. He was gracious enough to send me a copy of the proceedings (you may get your own by writing the ARRL). A standard way to interconnect digital radios (DRs) and terminal node controllers (TNCs) has been bothering me (an apparently others) for years.



Currently each radio and each TNC has different connectors, different signal levels, and different signals which are required. This is far from our desire of "plug and play" digital communication. The following is my interpretation and agreement with "A Proposal for a Standard Digital Radio Interface" given by Jeffrey Austen, K9JA.

Interface problems today are:

1) no common way of interfacing higher speeds such as 9600 baud,

2) different connectors for each TNC and radio,

3) every new installation requires adjustment of receive and transmit tone levels for proper operation and the list goes on.

Requirements for a connection scheme between a DR and a TNC are: <> connect any DR to any TNC, <> be transparent to the data stream, <> operate over a wide range of speeds, <> accommodate both synchronous and asynchronous modulation modes, <> operate both half and full duplex as well as TX-only and RX-only, <> provide good immunity to interference (EMI), <> tolerate equipment variations with no adjustments, <> use cable lengths up to 10 meters, <> be usable with all existing digital communication as well as anticipated future modes, <> operate using existing speeds up to at least 2 Mb/s, <> standardized connectors for "plug and play", <> sense when cable is disconnected or when the DR is powered down, <> make use of existing standards where possible, and <> allow easy migration from the current system.

This proposed standard takes into account the current standards such as EIA/TIA-232, EIA/TIA-422, EIA/TIA-423, CCITT V.10, V.11, and EIA/TIA-449. There is no existing standard which takes into account all the requirements. SIGNALS to send data from the DR to the TNC are: <> Receive Data: data from the DR to the TNC, <> Receive Clock: clocking signal for receive data originated at the DR, <> Receive Data Valid: a signal from the DR which indicates that the received data signal is valid (like Carrier Detect).

SIGNALS to send data from the TNC to the DR are: <> Transmit Data: data from TNC to the DR, <> Transmit Clock: originating at the DR, <> Request to Send: signal from TNC to DR indicating that data transmission is requested, and <> Clear to Send: a signal from DR to TNC indicating that data transmission may proceed. The last signal is <> DR Ready: a signal from the DR to the TNC indicating that it is powered up and capable of reception and/or transmission of data.

The Interface Proposal: With the above signaling requirements in mind, the proposal selects a combination of EIA/TIA-422 (differential) and EIA/TIA-423 (single-ended) signal levels. The two data and clock signals because of potential high speed will use the differential mode. Status signals may be single-ended because they are quite low speed. There will be two ground lines, one in each direction according to the EIA/TIA -423 specification. To assure "fail safe" operation, (fault or lack of power), "fail-safe" line receivers will be used for the four status signals (RDV, RTS, CTS, and DRR).

Most of the problems of turnaround are due to the internal delays in the transmitter, thus the Delay settings should be the responsibility of the DR rather than the current method in the TNC. The physical connector selected is a high density 15-pin D-series connector using a Male (plug) on the TNC and female (socket) on the DR. This is the same connector as used for many current computer video connectors but the gender is reversed so confusion should not occur. The cables will be "extension cords" in that all pins are passed straight through. The shell will be used for the shield connection if there is a shield in the cable. All DR's and TNC's shall use metallic connector shells.

This interface allows direct connect between DR and the TNC as well as two DRs or two TNCs together. This spec may be incorporated into new radio designs by including the "modem" with the radio and by providing a method for switching modes (e.g. voice, 1200 b/s data, 9600 b/s data). It provides simple, inexpensive, versatile, and easy to use solution. The author K9JA welcomes comments on this proposal.

I have found that this is a most reasonable and inexpensive way to standardize interconnections between digital radios (DRs) and terminal node controllers (TNCs) and will retro-fit my hodge-podge of interconnections. I hope that equipment manufactures incorporate these connectors and signals in all future digital radios. This will allow true "plug and play" for the experienced and inexperienced digital communication operator.

de Joel, K9TBD

Just the minutes

by Bob, N3OLH, Secretary

The September meeting of the Delaware-Lehigh Amateur Radio Club was called to order at 7:35 P.M. in the Northampton County Community College on Thursday September 1, 1994 by Bob Green, KE3AW, the Club President. Approximately 78 members and guests were present.

Amy. KD3TI, made a motion to approve the minutes of the August General Meeting as printed in the September issue of the W3OK Corral. The motion was seconded by Bruce, KA3TIU, and was approved by the membership.

The Treasurer's report was presented by the club Treasurer Dick, KA3MOU. The report showed a cash balance of $6,724.85 as of August 31. Dick also gave a preliminary financial report on recently held Club Hamfest. Although all of the bills have not been paid, this event will net about $3,000 to the Club. Joe, W3JD, made a motion to accept the Report and the motion was seconded by Jim, N3QZS. The report was accepted.

The President read two letters of thanks that the DLARC had received. The first from Mary Bartolacci thanking the Club for the many condolences the family received. The second was from "Dream Come True" thanking the Club for our contribution in memory of Brownie, W3CJI.

Membership applications were received from

Harold Carbonneau, Jr., N3SWZ;
Edward Finberg, N3QIH;
Christopher Hogan, N3QIM;
Charles James, Jr., N3RND;
Matthew Kern, unlicensed;
Douglas King, Call Pending;
Jim Peppard, N2UZG;
Daniel Ruth, KA3AQV;
Jeffrey Ruth,Unlicensed;
John Rutkiewicz, N3SXB;
Walter Super, W3GFA;
Ronald Williamson, N3TBD.

A motion and second was received to accept these applicants into membership. The membership voted to accept these members. The club welcomed the new members into the club. In addition, the President recognized all of the guests who were in attendance.

It was announced that the winner of the QRP contest at the recently held Annual Club Picnic was Ken Weirbach, WC3Y.

Clarence, W3PYF, announced that there no problems with the club provided communications for the Easton Hospital Walk held on August 7, and that the event came off without a hitch.

Bill, K3ANS, provided the membership with a review of the Hamfest and thanked all of those members who helped make it a success. Each of the Committee Chairman then gave a brief report on his area of responsibility.

Bob, KE3AW reminded the membership that the new session of Novice/Tech classes will begin on September 12 at Gracedale. Bob also announced that the Post of Publicity Chairman is vacant and any member interested in the job should contact any of the Executive Committee members.

Van, K3CP, Chairman of the Nominating Committee presented the following slate of Officers for 1994-1995:

President: Bob Green, KE3AW
Vice Pres.: Tom Frobase, N3LLL
Secretary: Bob Gerst, N3OLH
Treasurer: Dick Dech, KA3MOU

For the Executive committee, **5** are to be elected, the Committee proposed the following:

Ray Bilger, W3TDF
Joe Brue, N3MKZ
Don Curtis, W3LR
Bob Dickinson, W2CCE
Chris Hornaman, NU3L
Bob Kratz, KU3K

Elections will be held at the October Club meeting.

Bob, KU3K, announced that volunteers are need to help provide communications for the Lehigh Valley Wheelman's Bicycle event to be held on September 11.

Volunteers are also needed for the Habitat for Humanities bicycle event to be held on September 25. See Clarence if you can help and for the MS-25 on October 9. See Bob, WF3H if you can help.

The Scouts Jamboree on the Air (JOTA) will be held on October 15-16. Hams are encouraged to invite scouts into their shacks during those days to show them what Ham Radio is all about. Dave, WD5BRP, is the local coordinator for this event. Please contact him if you would be willing to show your operation to the scouts.

Robin, WA3T, showed a radio from WW2 that was manufactured by the Polish to be dropped behind enemy lines for use by the resistance.

Ray, W3TDF, the evening's speaker who explained about logging for the PA QSO Party gave a sneak preview of his talk to try to encourage all of or members to participate in this event.

The meeting was adjourned at 9:00 PM.

de N3OLH, Secretary

New Media Systems

Coming to a Telephone Company Near You

By Joe Chuk, W3JD

In past columns I've written about several attempts (both successful and unsuccessful) by telephone companies to join forces with cable operators as a way of getting involved in video entertainment . "Convergence" is the term applied to companies' taking advantage of new technologies to cross over what used to be clearly-defined boundaries between businesses. In August, six of the seven regional Bell companies took convergence a step further by going straight to Hollywood.



Ameritech, BellSouth, and Southwestern Bell struck a deal with Disney to create, market, and transmit both traditional and interactive video programming. This would be accomplished by a new company that would offer a whole spectrum of services that, in the not-too-distant past, would hardly have been associated with telephone companies: movies on demand, home shopping, interactive games, travel and information services, educational programming.

In order to provide a comprehensive choice of services, this new program system will use a number of sources in addition to Disney, including programming currently offered on cable systems. Since such a large variety of services could well be confusing, the venture will also produce a "navigator" to allow easy customer access. Disney's expertise in graphics and animation is expected to play a major role in developing this service interface.

Three other telcos -- Nynex, Bell Atlantic, and Pacific Telesis -- are discussing a joint venture with Creative Artists Agency to create a "cyberstudio" to develop and distribute products specific to the digital world: virtual reality, CD-ROM, and other interactive products.

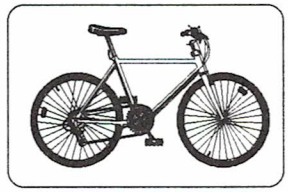
US West was the only Baby Bell not in the news recently for forming a video entertainment alliance, but that's because this company already has a $2.5 billion stake in Time Warner Entertainment, with its expertise in both program production and cable operations.

Because of current FCC restrictions, telephone companies for the most part may not own the programs they provide on the new video dialtone systems they are developing. The telcos would like that situation to change, of course, and Bell Atlantic has threatened to sue the FCC for the right to offer their own programming, citing a federal court decision that allowed the company into the video business. Regardless of what results from that suit, we are likely to see telcos continue to seek out sources of programming through ventures like these to develop the content for the new distribution networks.

Century Run Gap Gallop

by Bob, KU3K

I have been helping the Lehigh Wheelmen with this bike jaunt for over ten years. This is a wonderful day of biking fun designed to stretch any biker to his or her limit. The fans call this run "beautiful" since it winds through the Pocono and Little Gap areas. The pedals move early especially for those who plan to ride the 100 miles to the finish. The LW record for 100 miles is slightly under five hours. It takes most riders seven or eight hours. 25, 50 and 75 miles are other options.



The family participation (a baby rode the circuit in a special cart attached to the bike of one mother, another couple rode together on a two seat) is great, and our radio club has been responsible for communications almost since the first gallop about fifteen years ago.. Sunday, September 11 just happened to be a really beautiful day for biking. We started about 7 am and my Delaware-Lehigh Amateur Radio Club Iron Force came through as usual. Many thanks to ALL who participated.

KA3TEQ and Marcia	**KD3SQ**
N3EBH and Diane	**KE3AW**
KD3TI	**N3RVH**
W3FYK	**N3FEA**

and to **KA2ZQI** and his wife who dropped by in the early afternoon.

Without the help of these people the Lehigh Wheelmen would surely experience a day of nail biting and nerves waiting until the last entrant crossed the finish line. Just knowing our people are there ready to dispatch any necessary help makes this day fun for all and a great personal pleasure for me! Thanks again volunteers.

de Bob, KU3K

Revival Tent

There was a large revival meeting on the outskirts of town, and at the appropriate corner there was a large sign proclaiming: "If you're weary of sin and want to be saved, turn here, go 100 yards, and come into the revival tent."

Below the sign someone had hung another smaller one: **"IF NOT WEARY, Call 876-3550"**

Hackers take on the Pentgagon

From The Westlink Report Number 678

For the better part of the last half year, the Pentagon has been unable to locate hackers tapping into its unclassified computer system. According to the Associated Press, Defense Department officials have known since December that intruders in the United States and abroad have gained access to Pentagon computer files through the Internet and, in some cases, stolen, altered and erased records. But despite a security budget in the "hundreds of millions of dollars," the Pentagon has been unable to close the breach.

Investigators do know that hackers obtained access codes for more than 100,000 users on computers across the entire Internet, including the Pentagon's unclassified Military Network, or Milnet. Those codes guaranteed that the hackers could continue to access the Pentagon system at will.

The Internet is an international collection of 2.2 million linked computers at universities, corporations, and government agencies and used by more than 20 million people. Milnet is linked to Internet.

Investigators have found no indication that the hackers have as yet breached the classified systems that control critical functions such as nuclear weapons and the movement of troops and ships.

It's not as if someone's going to get in and push a button and Buffalo's going to disappear," said a Pentagon official who spoke on condition of anonymity. But in an official statement, the Pentagon admitted it really did not know how far into national security the hackers had accesed. The agency says that accurately estimating the extent of the intruder activity is very difficult.

Unless the intruders are apprehended and data are seized indicating the nature of the activities that took place, the department's ability to assess the severity of this incident is limited," the Pentagon said.

The preceding from The Westlink Report.

de Chris KD3OA ARRL EPA Bulletin Mgr



Rhode Island user ordered off two area repeaters

Two Radio Clubs Accuse Ham of Jamming

From The Westlink Report Number 678

Rhode Island man is the latest licensed amateur radio operator ordered to cease operating on area repeaters because other hams accuse him of harassing several repeater systems.

Quoting FCC regulation 97.205(e) in a letter to Edwin Barton, N1JBC, Michael P. Deignam (KD1HZ), trustee of the 441.750 MHz repeater in Providence, has thrown Barton off his machine for what Deignam calls "numerous instances of malicious interference for which Mr. Barton shows no remorse and continues to deny publicly to this day."

In a related move, the members of the Ocean State Amateur Radio Group, acting upon transmitter "RF fingerprinting and Doppler DF" evidence provided by several local amateurs, have thrown Barton out of their club and ordered him not to access the club's 146.70 MHz 2 meter repeater in Cranston.

The evidence presented allegedly shows that over the course of several years Barton has repeatedly interfered with ongoing QSOs of repeater users he doesn't like personally, and has attempted to crack the control codes of the repeater for malicious gain.

Even though "caught" and confronted by the several local amateurs mentioned above, malicious acts continued forcing several members to bring a motion to the general membership at an OSARG business meeting. The vote to terminate Barton's membership and to revoke his repeater access was overwhelmingly positive, with over 90% of the membership in attendance voting for the motion.

The preceding from The Westlink Report.

de Chris KD3OA ARRL EPA Bulletin Mgr

Susan's Quotations

One difference between genius and stupidity is that genius has limits. *_anonymous*

"Never" tempts fate. *_anonymous*

Everybody dies. The difference is what you do till then. *_anonymous.*

Ham TV on your VCR

by Fred Lehmann, WAOPBL

Many of the newer VCRs can receive ATV in the 70 cm amateur band without modification. Set the VCR for CATV.



If there is a switch labeled IRC-STD-HRC, select STD. Set the channel selector for cable channel 57, 58, 59 or 60. Install a UHF TV antenna on the roof and point it at an ATV repeater. Connect the antenna to the VCR cable input (in some older Hitachi models, use the UHF input). On some VCRs, a signal is needed for the auto-tune to work. Some RCA VCRs, for example, will skip a channel with a weak signal. You could use a small bullet pre-amp (less than $20) at the antenna, but not if you intend to transmit on the same antenna. Use high quality coax such as Belden 9913 to minimizes signal loss. Each channel tunes a center frequency six MHz higher, starting with channel 57 at 423 MHz.

If you have an older cable-ready VCR, the highest cable channel you can tune is 36, so ATV isn't possible. If you are looking for a new VCR, check the highest cable channel it tunes. On a new JVC machine, reception quality was almost as good as with an ATV down converter.

from the Silicon Valley Emergency Communications System "Repeater"_Cathy and Don Gaubatz, N6SPC and W6GJF, Co-Editors

The Wind Has No Memory

by Don Gaubatz, W6GJF

The wind flits willy-nilly here and there, bending boughs and stirring dust. After its passage, the boughs straighten and the dust settles. So it is with sound; the echoes soon die.

Neither wind nor sound leave much evidence of their passage. Like wind and sound, radio waves pass_through structures, plants, and people_leaving no trace. Only if someone is there to feel the breeze, hear the sound, or detect the radio energy is their passage known. And so it is with amateur radio public service activities. According to our federal regulations, Amateur Radio exists to provide public service. The regulators can listen at any time to hams enjoying their hobby, but they usually aren't present when hams are providing public service.

So when they are asked to support amateur radio legislation on the basis of our public service, an image of a ham rendering such may not be the first that pops into their minds. Radio spectrum is continually sought by powerful interests, including companies providing cellular telephone service, television, wireless computer networks, radio location, cordless inventory and storage systems, vehicle dispatch, transportation coordination, paging services, navigation aids, as well as police and fire agencies and the like. The perceived needs of hams, with their hobbyist image, pales in comparison to the rationale presented by these users as they push for more spectrum.

Hams do, on a daily basis, render public service. But, is there any record of such service? Is the record available when legislation is being considered for incursions on our "hobbyist" spectrum? If we want amateur radio's continued existence, we must replace the hobbyist image with one of providing valuable public service_essential public communications that the public can rely on during emergency situations. Who is responsible for keeping a record of the public service rendered by each ham?



As the only one usually there to feel the breeze, listen to the sound, or detect the radio energy, it must be the individual amateur who performed the service. Each ham needs to document all public service he or she provides and a local ARRL-affiliated ham club should collect the records. The accounts of public service may then be handed to publications, interested groups, legislative personnel, and the federal regulators. Such records will document amateur radio's fulfillment of its charter. Then legislators might better understand why loss of spectrum would be detrimental to our ability to meet the communication requirements emergencies demand. Did you "feel the breeze?" Then you must ensure memory of its passage. Individual ham operators and our organizations must document the public service we provide. The future of amateur radio cannot otherwise be bright.

from the January '93 Silicon Valley Emergency Communications System (Santa Clara County, CA) "Repeater"_W6GJF Editor

Remarks of a personal nature

by George N3OWG

"The Tinkerers Guide to the Galaxy" or "Daddy can you fix this?"

I am convinced that we are here because no other hobby could possibly stand having a huge group of fidgety tinkerers as its body of membership. Seems to me that any given ham is always fixing or soldering something together. Lets face it as an aggregate group we probably represent about 85% of the consumption of the worlds annual production of both tin and lead. And if truth were to be told most of us know more about the stock of the local hardware store than it's owner.



I got a panic call from the editor today reminding me that I had less than 24 hours to turn out some sort of literary gem for the Coral. I assured him that it would be done in due time. And I promptly went to work..... Re-wiring the dashboard lights on my Oldsmobile Delta 88. This testament to American automotive engineering was produced well before Detroit learned any lessons from Japan about the proper building of a motorcar hence there is very little that ACTUALLY works on it. Luckily for me as a duly licensed Amateur Radio operator I am also qualified to re-engineer anything. That is why my Oldsmobile now has Kenwood pilot lights in place of actual dash lights. And I am sure that I could write an entire article on how I replaced the electric window switches with 30 amp breakers.

I don't personally own any piece of radio gear that I have not disassembled and modified in some way. That I think is true of most of us. Regardless of how much bellyaching about how over sophisticated the "new" radios are I figure that the life of the factory torque on the cabinet screws on a new radio is about 15 minutes after unpacking. Modifying an HT for MARS/CAP even though you aren't a member of MARS is a popular tweak. I know that if I were of a mind to I could use my Kenwood 930s as the worlds most expensive CB radio. Amazing what you can do with a pair of wiring dykes and a soldering iron. And my poor Midland 2 meter rig is about as far from stock as ever could be right now. I bought this baby thinking "Great Packet radio". This baby now has switches and plugs where God had never intended them to be.

After rewiring the Olds today I took a stroll around the grounds. (I still had 19 hours to go for the article!) I could tell that I was getting N3SWA (my wife Bonnie) nervous. She was looking at me the way a condemned man looks at the phone outside the gas chamber. See I was looking up. To the trees. I am to be sure more prolific at spinning webs in branches than even the most dedicated of tentworms. Albeit that mine are woven from copper and aluminum rather than silk (Do tentworms weave in silk?) At last count I have pieced together over 15 wire antennas strung through my trees in a most insane pattern. Antennas are a passion shared by all Hams. I took note today (with 15 hours to go) that I have like 7 antenna books around here. I was looking for that one last collection of wire that would put me into the "super station" class. Funny thing is that I have visited super stations and there owners seem equally intent on producing antennas. I can only surmise that it is a genetic trait shared by us and one that eventually leads us to fill out a form 610. I have decided that a cage antenna for 160 meters might just do the trick.

I don't think that antennas is where this all stops though. I know that each one of us has a big collection of desoldered odds and ends that we call a "junk box". I have read entire magazine articles dedicated to building projects just from your junk box. I made one of these once. SWA asked me "What is that collection of junk?" Frankly I had no answer. I know it was well constructed, I knew that it must be useful or it would never have been published in QST, and I knew that building it was a soul satisfying experience. (Bonnie knew that it was a collection of junk!)

Well best I scoot whilst I have 20 minutes or so to get this up on packet. But before I do I think I want to reroute the cables to the TNC and perhaps check the SWR on the Ringo I don't think it would take more than 15 minutes or so to tweak it up to snuff. And while I am doing that take a look around you. I am sure you will see a few items that you have left unmodified or unbuilt. So grab it down off the shelf and fix it, build it, tweak it. It'll be good for your soul and keep you from joining the Numistacist Society of America!

de N3OWG

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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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
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