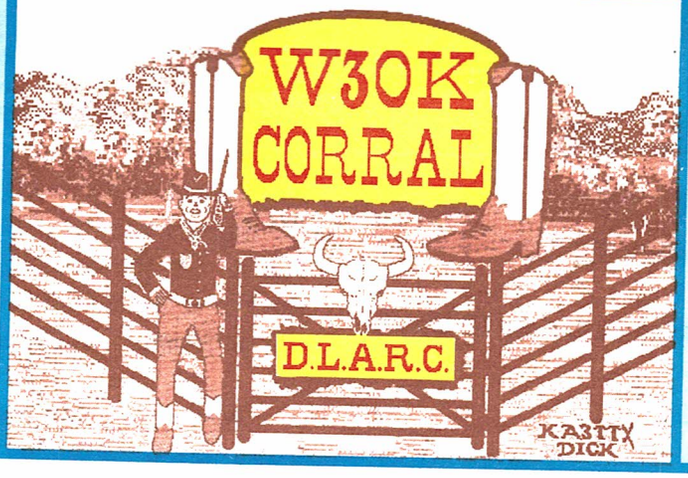
DELAWARE • LEHIGH AMATEUR RADIO CLUB, INC. W3OK

January 7, 1993



SPECIAL SERVICE CLUB
ARRL Affiliated Club

CAN I GET CONNECTED" TO NTS? SURE!

N0KIA TELLS HOW

Would you like to work the National Traffic System (NTS) but have second thoughts about getting on the nets? Did you enjoy last December's program by Carter Craigie on NTS and want to learn more? Well, wisdom seeker, come to the DLARC's January meeting and be entertained by Paul Ryan, N0KIA, as he speaks on "Packet and the NTS - Entering the System Through the Back Door." Paul will present the proper format for launching traffic using a packet station. Also included will be how to locate and remove traffic, how to deliver traffic, hints on preparing files for transmission and finally, where to get more information on the NTS. Bring your notebook and questions and let's all review one of the lesser known but highly rewarding aspects of amateur radio. We may all leave in a better "FRAME" of mind de Bill, K3ANS

NEW CLASSES TO BEGIN

by Chris, NU3L

If you want to upgrade now is the time. Beginning on Monday, January 11th, and running for six weeks, The DLARC will be running General Classes.. Beginning on March 8th, classes will resume for Novice-Tech. If you have any interest, call the DLARC Info line @ 820-9110, listen to the announcements and ten leave your name, address and telephone number and someone will get back to you, of course there is no charge for the courses except for course materials.

CHECK YOUR MAIL LABEL

by Dick, KA3MOU, treasurer

Check your mail label. If there is a red line on the Membership Expiration date, you DUES ARE DUE. Please mail them to me as soon as possible. The new directory of members will go to press with the February issue, and there are many who have not paid their dues as yet.

There are few clubs around that only charge $12.00 per member with $3.00 for each additional member of the family at the same address. With all Autodial facilities available to them.

As of February 15th, the autopatch code will change and all who have not paid will have their Autodial numbers removed.

Mail your check made out to DLARC to:

Richard A. Dech KA3MOU
120 McIlhaney Avenue
Bath, PA 18014-1612

If you want to bring cash to the January meeting, be sure to put the cash in an envelope and put your name on the outside.

RESULTS OF THE CUBE PROBLEM

by Clarence, W3PYF

When Steve, W3HFT sent me the drawing of the cube with the resistors shown in the format in the last issue of the OK CORRAL, I didn't know the answer, and what is more, Steve didn't remember it either.

The number of answers that I received were more than I expected. Three who answered the question even made drawings and showed how they came up with the answers.

The answers were all the same. The answer first was from Joel, K9TBD who came up with the answer of 8.3333 ohms. Joel, Gus, W3PTG, and Paul, KA3MTY (who dug his old school books) all made drawings which told how they came up with the answers. W1HAB had the same answer and Robin, WA3T, came up with the fraction 5/6 ohm which is the same thing.

K3HKZ, figured it out by building it and measuring it.

If anyone has anymore of this types of questions please let me have them for further issues.

de W3PYF, Editor

THIS MEETING JANUARY 7th.. at NCACC is in NORTHAMPTON AUDITORIUM 7:30 p.m..
Directions on W3OK, 146.70 repeater

THE PREZ SEZ

HAPPY NEW YEAR

by Robin, WA3T president, DLARC

1993 promises to be a banner year for the Delaware Lehigh Amateur Radio Club.



Our membership continues to increase, even though we don't have membership drives or other aggressive recruiting tactics. We just do our best to serve the ham community, prospective hams, and our local communities: our rising membership is a byproduct of what we offer, not a goal in itself.

At the same time, we're sure we're not perfect. As your representatives, the members of your Board do their best to be responsive to your wishes. However, they can only do so if you make your wishes known. So, if you have suggestions for improvements in any aspect of the club's activities, speak up! Talk or write a note to one of the Board members or Officers, or leave your comment or suggestion on the club's answering machine.

At the last club meeting, we took a straw vote on some of the possibilities for improvement of the club's repeaters and the club station, and on buying a portable repeater. The opinion was surprisingly evenly divided between the options: certainly more discussion of the alternatives is needed before we take action.

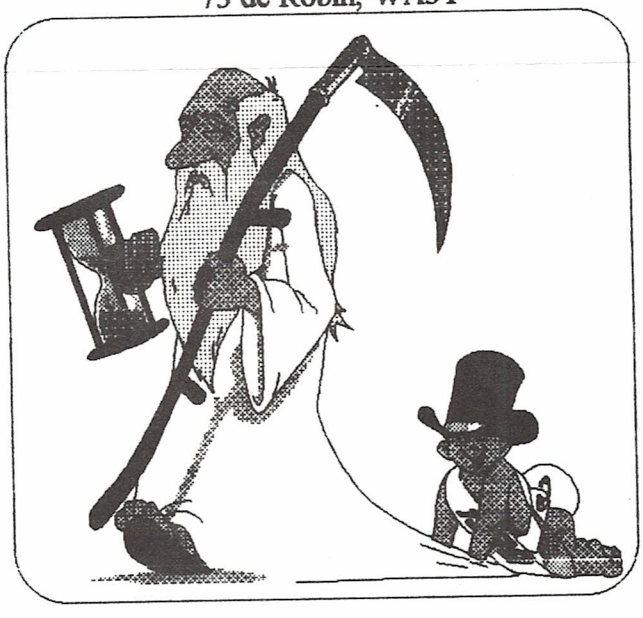
I was personally surprised to see how many were in favor of upgrading the club's HF station. Hardly anybody uses the present station (except at Field Day and for the "Christmas City" special event): the question is, "why not?".

My guess is that those who might use the club rig fall into two groups. On one hand there are newcomers to the hobby who haven't yet bought an HF rig, and want to gain some experience on the HF bands. On the other hand, are there hams who can't use HF at home because of financial, space, antenna or interference problems.

Why don't more people in these situations use the club's rig? Is it too far to travel? Do newcomers to the hobby find the present rig intimidating? Is the shack uncomfortable? Is it because the 430 is not a top-of-the-line rig?

I'd be very interested to hear from people who have considered using the club station, but decided not to, and to discover what held them back. Would a couple of comfortable chairs promote the use of the station? Or placarded instructions for using the rig? (Bob, KE3AW is working on this one.) Please tell us why you don't use it!

73 de Robin, WA3T



FROM ALL OF THE STAFF OF THE OK CORRAL AND THE OFFICERS, A VERY HAPPY AND HEALTHY NEW YEAR

Guess which of the above is your editor, W3PYF

CONTEST CALENDAR

by Barry, KU3X, Contest Editor

Jan 9 W1AW Qualifying Run 35-10 WPM
Jan 9-10 Hunting Lions in the Air Contest, phone
North American QSO Party, CW
Jan 16-17 North American QSO Party, SSB
HA-DX Contest
Jan 23-25 ARRL January VHF Sweepstakes
Jan 27 W1AW Qualifying Run 10-35 WPM
Jan 29-31 CQ World Wide 160 Meter Contest,CW
REF French contest, CW

CONTEST TIP #8

Listen to WWV propagation forecasts. Also, QST and CQ magazines both have information on predicting propagation for the bands. Information is provided in these to help you understand the charts and graphs that are provided. de Barry, KU3X

LES LOHRMAN, WA3ENE HONORED BY MARS

Recently, Les Lohrman received two awards from Army Mars. He received an award recognizing his handling of 898 messages during the Desert Storm, Desert Shield period.

The second award was the PA MARS operator of the year award, 1991-1992. It was presented by Col. Ed Lukas, the PA Army Mars Director. Congratulations Les for a job well done.

JUST THE MINUTES

by John, N3IGA, Secretary

The DLARC meeting was called to order at 7:32 p.m. on December 3, 1992 at the Northampton County Community College. There were 81 members and guests at the meeting. November's meeting minutes were approved as printed in the newsletter with K3CP making the motion and second by W3TDF. Dick, KA3MOU, gave the treasurer's report with an ending balance, as of November 30, 1992, of $6595.98.

We would like to welcome the following new members into the Delaware -Lehigh Amateur Radio Club.

Walt Jones, KB3QW,
James Ditursi, N3EYJ,
Walt Bojko, N3MLA,
Juan Bauza, WP4HZZ,
Jeffrey Nagy, KA3PUW,
Luis Rodriguez, N3MUP,
Kenneth Hunt call pending
William Moser call pending,
Margaret Buchin.

Chris, NU3L, informed the members that the General Classes will start on January 11, 1993 and will run 6 weeks. The class will be basically theory with some CW. Novice-Technician Classes will start March 8, 1993. If you know somebody that is interested, please have them call the DLARC phone line, 820-9110, and leave their name and address so that they can receive the information packet.

Robin, WA3T, informed everyone that VE Testing will be held at the Greystone Building, December 4, 1992. Team #4 will be present.

If you haven't given Clarence, W3PYF, or Dick, KA3MOU, your 4 digit number on your zip code, please get it to them. It helps in the mailing of the newsletters.

Bob, KE3AW, asked for volunteers to work the Christmas City Special Event. There are still some operating times available. Robin asked the members present if there was an interest in having a club raffle. There seemed to be an interest, but there was no volunteers to take charge.

Members present seemed to be in favor of upgrading the club station. There was also a discussion on setting up the Special Event station with something beside phone capabilities like AMTOR or RTTY.

January's program will feature N0KIA, Paul Ryan, who will talk about using Packet with National Traffic System(NTS). February's program will have W0RSJ, Bill Murphy who is a well known VHF contester.

The feature program was Joe Pearlstein, NU3Y and Barry Cummings, WB2R, who talked and showed slides of the expedition to the islands of St. Pierre and Miquelon off the southern coast of Newfoundland. Paul, KA3MTY, also showed slides taken during a big bike race. de John, N3IGA

IMA LIDD

***DSP ***

by Van, K3CP

Ima greeted Elmer, "Hi, Elmer. I have a big question for you today."

"Hi, Ima," replied Elmer. "It's good to see you again. What is your question this time?"

"Well I have heard a lot about digital signal processing lately. I have heard about it on the air and have read about it in the ham magazines. Can you tell me in simple terms what it is, what it does and what is its application to ham radio?"

"Yes," said Elmer, "I think I can explain it to you. It's really not difficult.

"Ham signals, and others for that matter, that we hear over the air are what is known as analog signals. Before we go any further we must understand what analog and digital means. An analog signal is one that varies an infinite number of values. A digital signal is one that varies in discreet values. Let's look at a practical example. You are familiar with two types of displays used on wrist watches. One has hands rotating on a face of numbers. The value represented by the minute hand when it is between the numbers one and two can be any value between 1 and 2. On a digital watch, however, the value is exactly displayed. It is either one or two and nothing in between. Let's take another example. Suppose we were in a building containing two elevators. One elevator had the familiar rotating hand to indicate the location of the car. If the hand pointed between the first and second floor you would know that the car was somewhere between the two. You could tell whether the car was closer to the first or second floor by the location of the indicator hand. The second elevator had a digital readout and would indicate either the first or second floor. You would not know if the car was closer to the first floor than it was to the second. Are you with me, Ima?"

"Yes, I think so," replied Ima. "It seems to me that the analog method is better because it gives us more information about the exact location on the car. Is that right?"

"It would appear so," said Elmer. "Think about this. In the case of the analog indicator, you really don't know positively where the car is when it is between floors. You must interpolate. Now suppose we added a second digit to the digital indicator. The original digit would still indicate the floor number, but we could use the second digit to indicate a decimal number - say zero to nine. If this indicator read 1.5, we would know that the car was exactly half way between the two floors. Going one step further, we could add another digit. Now if the indicator read 1.99 we would know that the car is very, very close to the second floor.

"Oh, I see," said Ima. "Another example would be a digital voltmeter. we could use three, four or more digits to measure voltages to any number of digits."

"That's right," said Elmer. "Don't make the mistake of thinking that digital is more accurate than analog. When the analog voltmeter's pointer is on five volts, it is just as accurate as the digital type. In these examples we are talking about the displays. The accuracy of the voltmeter lies in the design and quality of the components used in the associated circuitry. I took a long time to explain the difference between the two methods, but I thought it was worth it.

"Now, let's talk about signal processing. It's not new. We process a signal when we send it through a crystal filter. That's been around for a long time. What is new are the devices that are now available at a reasonable cost so the hams can now digitize a signal at affordable prices.

"To digitize an analog signal, we sample it at various times. We then assign a binary value to each sample. This value represents the amplitude and the time scale of the signal. The number of samples determines the fidelity of the digitized signal. An engineer by the name of Nyquist discovered that it was necessary to take our sample at a rate that was at least equal to twice the highest frequency of the analog wave form with which we were working. If we don't sample this often we cannot accurately change back to an analog signal. This is known as under sampling. We can over sample as well. All this takes a lot of computer hardware and memory so we have to be practical in our sampling rate.

"OK," said Ima. "I understand so far, but what does this mean to hams. How does digitizing help us, Elmer?"

"We are out of space this time, Ima. We will continue this discussion at our next meeting. So long for now."

de Van, K3CP

1 SO, HOW'D YOU BREAK YOUR ARM?

courtesy of WD5BRP

A friend just got back from a holiday ski trip to Colorado where the condition were perfect--12 below, no feeling in the toes, basic numbness all over, and a "tell me when we're having fun" kind of day.

One of the women in the group complained to her husband that she was in dire need of a rest room. He told her not to worry, that he was sure there was relief waiting at the top of the lift in the form of a powder room for female skiers in distress. He was wrong, of course, and the pain did not go away.



If you've ever had nature hit its panic 1button in you, then you know that temperature of 12 below zero doesn't help matters. So with time running out, the woman weighed her options. Her husband, picking up on the intensity of the pain, suggested that since she was wearing an all white ski outfit, she should go off into the woods. "No one would even notice," he assured her. The white would provide more than adequate camouflage. So she headed for the tree line, began disrobing and proceeded to do her thing. If you've ever parked on the side of a slope, then you know there is a right way and a wrong way to "set" your skies so you don't move. Yup, you got it. She had them positioned wrong. Steep slopes are not forgiving, even during embarrassing moments. Without warning, the woman found herself skiing backward, out of control, racing through the trees, somehow missing all of them, onto another slope. Her derriere and the reverse side were still bare, her pants down around her knees, and she was picking up speed all the while. She continued on backward, totally out of control, creating an unusual vista for other skiers.

The woman skied, if you define the term loosely, back under the lift, and finally collided violently with a pylon. The bad news was that she broke her arm and was unable to pull up her ski pants. At long last her husband arrived, put an end to her embarrassment, then went to the base of the mountain and summoned the ski patrol. They transported her to the hospital.

In the Emergency Room, she was regrouping when a man with an obviously broken leg was put in the bed next to hers. "So, how'd you break your leg?, she asked...making small talk.

"It was the damdest thing you ever saw," he said. "I was riding up the ski lift, and suddenly I couldn't believe my eyes. There was this crazy woman skiing backward out of control down the mountain with her bare bottom hanging out of her clothes and her pants down around her knees. I leaned over to get a better look and I guess I didn't realize how far I'd moved. I fell out of the ski lift!--So, how'd you break your arm?"

A story I read in the El Rancho Gazette.

de Dave, WD5BRP

DECEMBER 4th VE SESSION RESULTS

by John, WX3C

The Delaware Lehigh Amateur Radio Club December VE session was held at Gracedale, there were 11 candidates who took a total of 16 elements. There were 5 up grades and 1 new Technician. These included:

Donald W Reamer, KA3JWE, Advanced
Carl Seier, KA3ZWT, General
John Rogovic, N3KLI, General
Richard A Weaver, KB3AHA,Technician w/hf
Edward R Smith, KB3AIU, Technician
Elaine A Kita, New Technician

The team consisted of Ray, W3TDF; Bob, W2CCE; Ed, W3APE; Robin, WA3T; E.P Balinger, WU3T and John, WX3C. It was a small but pleseant session. The next VE test at Gracedale will be on **January 8, 1993.** Team 1 will attend. 73

De John, WX3C team liason.

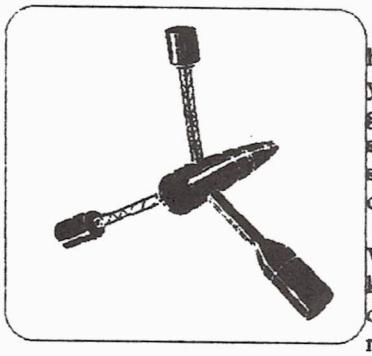
LEST WE FORGET!

Dues are due, and if you have not already done so, mail to Treasurer Dick Dech.

Richard Dech KA3MOU
120 McIlhaney Avenue
Bath, PA 18014-1612

Dues still $12.00 plus $3.00 each for additional family members.

SATELLITE PACKET
Part 2
by Tom, N3CXP



-Sounded easy so far, right? So how do I get hooked up? Well as you may have guessed, this part gets a little more involved. Getting started on the pacsats is fairly simple. However, efficient operation becomes more involved. If you've got a PC, some UHF and VHF radios capable of tuning in kilohertz steps and good omnidirectional antennas, a new modem to add to your TNC will get you up and running. For reliable communications, tracking antennas are a big help for efficient throughput. I occasionally use my J-pole to experiment and you can get started this way, but expect to get much less information per pass due to polarization fades and path loss. A 70cm mast mounted preamp is a must. You also need to get a 9600 baud modem to tie into you TNC. A word to the wise, choose wisely! When I started, I bought a PSK-1 modem from PacComm. Since I already owned a PK-232 TNC, this seemed like a logical choice. But being 1988 model it didn't have a modem disconnect header! No problem, TAPR makes one! Ah!, they said, you probably should add the improved DCD module for packet operation with an open squelch. Four pieces of equipment from three different manufacturers, each capable of configurations for dozens of combinations of clock speeds, TNC types, terminal baud rates, comm ports, IRQ's, hbaud rates...when this stuff decoded it's first packet, I felt like Alexander Graham Bell calling Mr. Watson. The story got even worse when I went to interface my AEA PK232.

This TNC cannot talk to your computer faster than 9,600 baud. While fine to use with the 1200 baud AO16 and LO19 pacsats, a TNC with a terminal baud speed of 19,200 baud or more is recommended for the 9600 baud satellites. I learned the hard way, as my tnc repeatedly asked the satellite for the same packets. In short a bottleneck develops as your TNC cannot pass information to your computer as it converts data and also switches to transmit and other functions. I just recieved an article from the file server on UO22 by Howard Sodja,] W6SHP on MICROSAT OPERATIONS WITH THE PK232 which has been submitted for publication in the AMSAT Journal. It discusses some of the problems and fixes outlined above.

The best advice I can give to those interested in getting started, is to purchase a matched modem and TNC. I now use a PacComm 9600 baud modem with a PacComm Tiny-2 TNC built into the same box. Getting operational was only a hour or so of hooking up several cables and configuring the modem. I even was able to interface another PacComm PSK-1 modem without much trouble. You get the idea. If you don't like being a BETA tester, check around and find out about the equipment that someone else has interfaced successfully.

9600 baud FSK (frequency shift keying) uses FM as its method of conveying information. This requires "radio surgery" to output audio from the 70cm receiver's discriminator to the modem and to input audio from the modem to the 2m transmitter's varactor diode. No, you can't cheat and try to use the fixed audio data connector or the speaker jack! It's is not a big deal to make these modifications, as most modems contain lots of information about a plethora of radios and which chip and pin to use. In addition, it also helps to have a method of Doppler shift correction to automatically tune your receiver's frequency. While not essential. UO22 is so high, thus in view so long, that it's downlink frequency changes by up to 20 kHz during a pass. Removing audio at the discriminator allows for a 10 kHz or so usable bandwidth, and the packet signals only deviate about 2 kHz. So, for quite a while, the birds downlink is in the passband. (Uplinks are not a problem as the satellite receiver bandwidths are plenty wide.) But, without some means of frequency correction, you'll miss out on some maximizing your throughput!

I bought my Kansas City Tracker automatic satellite rotor control package without the "tuner" option, which "tunes" the downlink radio via the up and down circuitry, based on calculated doppler shifts and the "step" for each click. I must adjust my vfo once or twice during a pass by hand, if I want to get maximum throughput. You might think that you should set your vfo at the middle frequency observed from several passes of the satellite as a sort of average or best place to pick up the bird. Wrong! I find my best average frequency is near the bottom third of the bandwidth. When the satellite is nearly overhead, the apparent velocity change relative to our fixed location, appears to be the greatest. At this point the doppler shift is most noticeable. By the time the satellite has moved away some considerable distance, it appears to be moving slower so corresponding frequency changes are minimized. (I could utilize an average frequency near AOS, but my radio horizon is lower to the north, where most passes end.)

Finally, I've talked mostly about UO22 and 9600 baud packet. AO16 and LU19 operate PSK (phase shift keying) utilizing Manchester modulation on the unlink and PSK on the downlink to convey the information. These pacsats require a separate PSK modem. Since USB or LSB is used during receive, Doppler shift correction is essential. The PacComm PSK-1 as well as similar modems have a sensing circuit to compensate for Doppler via the up/down mic connector. This method works well for controlling doppler. These birds only operate at 1200 baud and are changing formats to utilize the broadcast software described above. (AO16 has already switched.) The full duplex capability of the pacsats really speeds up 1200 baud packet. For informational text files and non-graphic formats, these satellites are also very efficient.

In summary, getting the hardware and software interfaced is the greatest obstacle and expense! Although a lot of different pieces of equipment are involved, its not as complicated as you might think. Satellite packet operations are very user friendly when you finally get the hardware together and they're a great way to enjoy receiving and sending lots of interesting information in an unattended mode! If you'd like to find out more, give me a call and I'll try to help!

de Tom N3CXP

PLEASE CHECK YOUR MAIL LABEL

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WE (DLARC) NEED TWO THINGS!
YOUR DUES IF DUE
THE EXTRA-FOUR AFTER YOUR ZIPCODE
Please get both to Treasurer KA3MOU

DIGITAL COMMUNICATIONS

by Joel, K9TBD,
Guest Editor WA9FIO, Van Elston
BMKMULTY - Multimode through Software

A multi-mode software driver for AMTOR/RTTY/CW/SSTV/FAX for a dumb modem by G4BMK. Distributed in this country by Schnedler Systems, Steve Schnedler, AC4IW, 25 Eastwood Road, Ashville, NC, 28813. (704) 274-4646.

If you like DIGICOM or BayCom, you will like BMKMULTY, a communication software driver for the PC enabling sophisticated control of a dumb modem. For the usual Amtor/Rtty/CW setup, a basic arrangement is: A: dumb software and smart TNC (multi-mode box) $250 - $1000, or B: Smart software about $95 and dumb but optimum TU (ST-6, DT-600, etc).

The bargain of course is at "B" in pure dollars. But the value is also at "B" because optimum distribution of resources plus the possibility of adding features of operation without purchasing additional hardware. This is the amateur spirit of experimenting and building.

Why hasn't it been done before? It has, with the software resident AX.25 controller for the Commodore 64, and later the PC. Some of the software features of the lowly C-64 are very sophisticated, if you have worked with Digicom version 3.51.

Considerable credit goes to Rudi Dussman, DL8MBT, the originator of Digicom and BayCom. Now G4BMK has used the same principle of taking direct control of the RS-232 port, to do the timing and decoding of typical HF digital signals or all types, with more to come. Probably this fall a software addition will include PACTOR operation as well.

What features of this software controller make it so spectacular?

1. The only commercially available software which allows the PC to run AMTOR with a dumb TU.
2. Advanced amtor algorithm synchronized exceptionally rapid.
3. Monitors both sides of an ARQ QSO without missing a single character from either side.
4. Automatic selection of MODE-L, FEC or ARQ-QSO mode eliminates the risk of missing an incoming call, as with others being locked into mode L.
5. AMTOR Upper/Lower Case mode implemented to G3PLX standard.
6. Display of return path delay times in AMTOR ARQ mode when you are the master.
7. Special modes: (DX) Go-faster relaxed decoding. (HR) High reliability mode (double-RQ's) to assure critical values, like a DX address.
8. Auto CQ. Auto call to APLINK stations and login.
9. Unique timing features. All trimmable.
10. SLOP, or Slave Optimization Parameter. Can launch data into the TU before the PTT line is asserted, with timing adjustable so that data appears on RF at exactly the time your rig is up to 90% power. This lets you work a path typically 1500 km longer, with fast or slow switching rigs, well into long path locations.
11. On board audio spectrum analyzer for tuning and signal analysis.
12. FEC 200 mode. (this is a preamble to PACTOR)
13. Many interesting other modes. Contest mode indexing. Auto-logging. Meteor scatter CW at up to 1200 WPM. Automatic call sign capture and selcal generation in all modes.
14. Happy with TTL or RS-232 voltages on I/O lines.
15. Modification instructions given for CP-1, ST-6, ST6000, DT-600, and other home brew TU, in the documentation. Mods are simple and easy for the non-technician.
16. Snoops nicely on commercial SITOR/NAVTEX.

The limitations:

This is commercial software, and you must buy it with your amateur call encoded. This software seems to be in a rapid phase of development, with many interim releases. It has been in this country about 1 1/2 years.

This is a sophisticated operating environment. It will require you to "read the book". It is not "window" managed. This is hard nosed command line interface stuff. Experienced CLI users will probably play amtor with the docs open on the desk for several weeks. After a while, when all the defaults have been set to your satisfaction, it will be possible to just use the abbreviated help prompt line on screen.

THE FARMER GETS EVEN

by Don, KI7AE

THE PURCHASE

A rancher had been "taken" several times by the local car dealer. One day, the car dealer informed the rancher that he was coming over to purchase a cow. The rancher, seeing his chance to get even, fastened the following "sticker" to the cow before the car dealer arrived.

1992 Deluxe Cow - Standard Features and Options

BASIC COW	$499.95
Shipping and handling	$35.75
Extra Stomach	$79.25
Two Tone Exterior	$142.10
Produce Storage Compartment	$126.50
Heavy Duty Straw Chopper	$189.60
Four Spigot/High Output Drain System	$149.20
Automatic Fly Swatter	$88.50
Genuine Cowhide Upholstery	$179.90
Deluxe Dual Horns	$59.25
Automatic Fertilizer Attachment	$339.40
4 X 4 Traction Drive Assembly	$884.16
Pre-delivery Wash and Comb	$69.80

Farmer's Suggested List Price:	$2843.36
Additional Dealer Adjustments:	$300.00
Total Delivered Price (including options)	**$3143.36**

EPA Mileage Rating 5 miles/haybale without calf.
2 miles/haybale with calf.

The above mileage ratings are estimates based on 1990 figures provided to the EPA by the Administration and may differ significantly from the actual mileage obtained by the above cow.

de Don, KI7AE

I know, it's not Ham Radio, but I liked the story,
de Clarence W3PYF, Editor



EAVESDROPPING

courtesy World Radio

" I just slobbered corn flakes over my keyboard. I gotta get a plastic cover or a drip-less spoon."

When time goes fast, where does it go?

"I'm a little bit older than you by 52 years."

"Getting old is easy to do if you live a long time."

"I worked you three years ago and I'm still on the same page of the logbook."

"My dumb terminal is certainly well named."

"I'm writing a computer program for DX hounds, it's going to be called The Boastmaster."

"I just heard some thunder, so I'm gonna have to pull the switch and toss the coaxes out the window, it's my only lightning protection."

"I can't print at this point, my cat is sleeping on the printer"

"Now I'd like to trade 73's with you and get out of this hot shack for a beer."

THIS MEETING ON JANUARY 7th
will be held in the
NORTHAMPTON AUDITORIUM
NORTHAMPTON COUNTY COMMUNITY COLLEGE
Call on 146.70 for info

What Is Electricity?

by Jim, K4JAP

Today's scientific question is: What in the world is electricity? And where does it go after it leaves the toaster? Here is a simple experiment which will teach you an important electrical lesson: On a cool, dry day, scuff your feet along a carpet, then reach your hand into a friend's mouth and touch one of his dental fillings. Did you notice how your friend twitched violently and cried out in pain? This teaches us that electricity can be a very powerful force, but we must never use it to hurt others unless we need to learn an important scientific lesson.

It also teaches us how an electrical circuit works. When you scuffed your feet, you picked up batches of "electrons," very small objects that carpet manufacturers weave into carpets so they will attract dirt. The electrons travel through your bloodstream and collect in your finger, where they form a spark that leaps to your friend's filling, then travel down to his feet and back into the carpet, thus completing the circuit.

Amazing Electronic Fact: If you scuffed your feet long enough without touching anything, you would build up so many electrons that your finger would explode! But this is nothing to worry about unless you have carpeting.

Although we modern persons tend to take our electric lights, radios, mixers, etc. for granted, hundreds of years ago people did not have any of these things, which is just as well because there was no place to plug them in. Then along came the first Electrical Pioneer, Benjamin Franklin, who flew a kite in a lightning storm and received a serious electrical shock. This proved that lightning was powered by the same force as carpets, but it also damaged Franklin's brain so severely that he started speaking only in incomprehensible maxims, such as "A penny saved is a penny earned."

This condition progressively became worse, and eventually he had to be given a job running the Post Office.

After Franklin came a herd of Electrical Pioneers whose names have become part of our electrical terminology: Myron Volt, Mary Louise Amp, Clyde Watt, Bob Transformer, etc. These pioneers conducted many important electrical experiments. For example, in 1780 Luigi Galvani discovered (this is the truth) that when he attached two different kinds of metals to the leg of a frog, an electrical current developed and the frog's leg kicked, even though it was no longer attached to the frog, which was dead anyway. Galvani's discovery led to enormous advances in the field of amphibian medicine. Today, skilled veterinary surgeons can take a frog which has been seriously injured or killed, implant pieces of metal in its muscle, and watch it hop back into the pond just like a normal frog, except for the fact that it sinks like a stone.

But the greatest electrical pioneer of them all was Thomas Edison, who was a brilliant inventor despite the fact that he had little formal education and lived in New Jersey. Edison's first major invention, in 1877, was the phonograph, which soon could be found in thousands of American homes. Here it basically sat until 1923 when the record was invented. But Edison's greatest achievement came in 1879 when he invented the electric company. Edison's design was a brilliant adaptation of the simple electrical circuit: The electric company sends electricity through a wire to a customer, then immediately gets the electricity back through another wire, then (this is the brilliant part) sends it right back to the customer again.

This means that an electric company can sell a customer the same batch of electricity thousands of times a day and never get caught, since very few customers take the time to examine their electricity closely. In fact, the last year any new electricity was generated in the United States was 1937; the electric companies have been merely reselling it ever since, which is why they have so much free time to apply for rate increases.

Today, thanks to men like Edison and Franklin, and frogs like Galvani's, we receive almost unlimited benefits from electricity. For example, in the past decade scientists developed the laser, an electronic appliance so powerful that it can vaporize a bulldozer 2000 yards away, yet so precise that doctors can use it to perform delicate operations on the human eyeball, provided they remember to change the power setting from "Vaporize Bulldozer" to "Delicate".

courtesy of Jim, K4JAP

All Amateur Radio Operators are invited to participate in the DLARC, ARES, RACE Nets on 146.70 W3OK with an alternate of 145.11. The Nets are held on Sundays at 9:30 AM and on Wednesdays at 7:00 PM.

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CLUB MEETING NIGHT

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

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