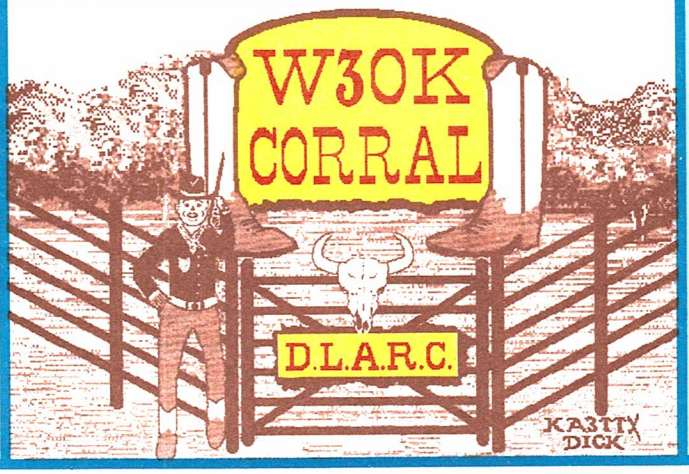
DELAWARE-LEHIGH AMATEUR RADIO CLUB, INC. W3OK

December 1991



SPECIAL SERVICE CLUB

ARRL Affiliated Club

CHRISTMAS CITY STATION OPERATION THIS YEAR

W3OK TO OPERATE AS XMAS CITY STATION

by Bob, WF3H chairman

On Saturday December 21, and Sunday, December 22, the DLARC will again hold the Christmas City Special Event Station.

The event runs from 9 am to 9 pm each day. and has always been very popular both with DLARC members and with stations around the world which have worked W3OK. We've had an excellent response this year from our members, and most of the time slots have been filled.

Our objective is to popularize the Bethlehem-Nazareth area by operating W3OK, with the identification of "***Christmas City Special Event Station from Bethlehem Nazareth PA***". Stations which work W3OK will be sent a certificate if they QSL with a SASE, and operators who participate from W3OK will receive a certificate. If you have any questions, please give me, a call.

The event has been advertised in the national Amateur Radio publications and should have a large turnout..

de Bob, WF3H

PA QSO PARTY WRAP UP

by Ray, W3TDF

DLARC PAQSO PARTY CHAIRMAN

I have checked 29 logs and 26 scores were given to Clarence from people who submitted their logs directly. Of the 29 that I checked I made corrections to 14, as a result of which I hope to put out a help guide next year.

Participation was down 18%, and the aggregate score was about 1,925,100, down 26% from last years momentous endeavor. Personally I missed the two mobiles that went through GRE, so that was the one I needed for a clean sweep. I believe there were about 4 club members who managed to make it; congratulations. Every time Clarence updated our projected total, rumors came in from Dauberville with something a little higher. Can it be envy, or did we really get beat? Time will tell. 73. de Ray, W3TDF

GETTING INTO THE NATIONAL TRAFFIC SYSTEM

by Bill, K3ANS

DLARC Program Chairman

What's the activity that's not only fun to do, but also spreads amateur radio good will to your neighbors? What sharpens your operating skills and preps you for emergency communications? How can you send and receive messages--for free--for yourself, your family and friends, and for folks in your community?

Come to the December 5th club meeting at KIVA Hall, at the Northampton County Community College to learn about the National Traffic System from Carter Craigie KD3AO, Eastern PA Section Traffic Manager. If you like to learn by doing, bring a pen or pencil and be ready to write and receive actual messages. You'll be surprised how quickly you pick it up!

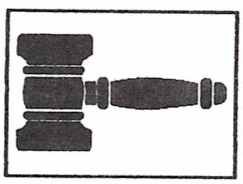
CLUB MEETING

DECEMBER 5th
NCACC
KIVA HALL
7:30 PM
TALK IN ON 146.70

THE GAVEL SPEAKS
by Robin, WA3T

THE DLARC MUST GROW!

What??? ....I can hear the questions already! Does our club need to grow for financial reasons? No! We are financially stable even though our annual dues must surely be the lowest in the country for a full service club. Do we need to grow in order to support a wider range of activities or better programs? No! Our club activities already range all the way from purely social to technical and competitive, and thanks to Bill, K3ANS we continue to have a great series of programs at our meetings.



Does the DLARC need to grow in order to become more diverse? No! We are fortunate to have a wide range of members; new hams and oldtimers, Novice to Extra, young to... well, let's just say not-so-young. I doubt many clubs so neatly offer a place for everyone.
So why must the DLARC grow?

Until recently, new no-code Technicians were a minority at our VE sessions. Now they are beginning to outnumber the candidates for Novice licenses and upgrades. Probably most of us learned about ham radio by visiting the shack of a friend or neighbor, and sharing the excitement of contacts with distant stations or rare countries. Perhaps we helped erect antennas, or watched "homebrew" rigs being constructed. So when we became hams, we had a fairly complete mental image of what our hobby is all about. But many people are not so fortunate - many who are now coming into the hobby have never even met another ham! They haven't seen, and can't possibly know of, the full range of ham activities. Maybe they don't NEED to belong to a club, and it's true that we don't need to grow. But they DESERVE our help and encouragement, and we owe them that, on behalf of previous generations of Elmers who helped and encouraged us. Let's welcome them into the club. More than that; let's seek them out and encourage them to join, so that they can see and experience the whole world of ham radio!

73 de Robin, WA3T



REQQTH, WHAT IS IT?
by Clarence, W3PYF

Thanks to Bob, WB3DTG there is a new feature operating in the area on packet on our local frequency of 144.97. Have you ever wondered what the address of a United States Amateur was without going out and buying a new callbook.

Here is how you do it:

Connect to WB3DTG-1..note WB3DTG-1.

If you have not called this facility before you will be asked to register. To do this, when requested do the following:

When it asks for your Name. type the following: N (your name) and c/r

When it asks for your QTH, type NQ (your city & state) and c/r

When it asks for your Zip Code type NZ (your zip code) and c/r

When it asks for your Home BBS, it you are using WB3DTG, type NH WB3DTG

When you call in again, it will be remembered and you will go immediately to the program.

At the normal prompt issue the following order: **SP REQQTH** then hit a Carriage Return

When asked for the title give the call of the station you wish to check on..such as W3TDF then hit a Carriage Return. You may put down as many as 5 calls as long as you leave a space between them.

At the Message prompt, send a ^z or /ex
Then wait until the next prompt comes up.
At that time issue the command RM

That is it, it will come back to you with the Name, Address, Grade of license, Date of Birth, and when the license will expire. When you are finished be sure to kill the message with a command KM. This will kill the message.

Try it, it is a great Service to all of us.

73 Clarence, W3PYF

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FOR SALE

Heathkit 230SB 80-10 meters. 600 watt SSB and 600 watt CW. Spare tube, unused. $400.00 or best offer. Call Vic WM3B @215 868-8188.

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REMEMBER AS STATED BEFORE: MEMBERSHIP IN ARRL IS NOT JUST A MAGAZINE SUBSCRIPTION.

IMA LIDD

INTERFERENCE FILTER

by Van - K3CP

"Hi, Elmer," said Ima Lidd. "It's good to see you. Do you remember that the last time we talked you said you would discuss a filter to remove alternator whine from a mobile radio installation?"

"Yes, Ima, I certainly do," responded Elmer. "We were talking about why your 100 mfd. capacitor would not be effective."

Ima concurred, "It did not reduce the interference because it did not present a low impedance path to ground."

"Yes, it's always a good idea to accurately define the problem before you try to solve it. Let's do that right now.

"The problem is to keep an interfering signal of approximately 500 hertz out of the power lines of a mobile installation. The last time we discussed this problem we determined that the impedance of the power supply circuit was found by dividing the voltage by the current. The voltage is 13.8 volts and the current is 8 amperes. 13.8 divided by 8 amps. equals 1.725 ohms. (R = E/I)."

"Let's see if I understand, Elmer. The filter that we are designing must provide a lower impedance path to ground than 1.725 ohms. Is that right?" asked Ima.

"A much lower impedance, but you are on the right track. Actually the shunt should be as close to a short circuit as is practical. If we need to reduce the whine amplitude to one tenth, then the shunt path to ground for the interfering signal should be .1725 ohms. Now the problem should be clear and we are ready to design a filter that will present (provide) a .1725 ohm path to ground. This will then direct most of the whine signal to ground. Do you have any idea of where to begin, Ima?"

Ima said, "Yes I do. We should use an L or Pi network with capacitors and inductors."

"Those are good choices, Ima," replied Elmer, "but there are others. For instance, we could use a series resonant circuit tuned to the whine frequency. That would present a virtual short circuit at the interfering signal's frequency. However, it would lose that ability when the engine changed speed and the frequency would also change. Let's use one of your first suggestions - one known as a brute force design. An L network should suffice although other configurations would also work. We must put the capacitor across the circuit because we want to shunt the AC signal (whine) to ground so that it will not reach the radio. Now, if we put the inductor in series with the positive lead from the battery, it will impede the AC signal. Remember, Ima, an inductor is an impedance to AC but not to DC. We want to allow the DC to pass through to the radio but keep the AC out of it.

"Now that we know the configuration of the filter, all that remains is to calculate the values of the components. We use the formula for capacitance. The formula is:-

$$C = 1 / (2 \times PI \times F \times Xc)$$

where PI=3.14; F= 500 Hertz; Xc = .1725 ohms
combining terms we get:-

$$C = 1 / 541.65$$
$$C = .00186 \text{ farads}$$

"Moving the decimal point 6 places to the right yields 1860 mfds. A 2000 mfds. capacitor will do the job very nicely."

"Let me see if I know where you will put the capacitor," said Ima. "It will work better if it's placed across the battery leads close to the radio. Is that right, Elmer?"

"Yes. As close to the radio as practical. Now we have circuit of .1725 ohms shunting the DC line which has an impedance of 1.727 ohms. This is a 10 to 1 ratio. This is not good enough, but it is a good start. The next thing we will do is to design an inductor to be placed in series with the power leads. We are running out of time, so I will leave that design up to you, Ima. Use the formula L = 2 x PI x F x Xl. Again, use a design factor of 10. Good luck, Ima. See you next time."

"OK, Elmer. Thanks a lot. I will have another question for you then. Actually I have been wondering about some of the theories that I hear on the bands. I am beginning to doubt some of them. So long for now."

de Van, K3CP

REMEMBER THIS IS DUES MONTH
SEND IT TO KA3MOU NOW!

DIGITAL COMMUNICATIONS

by, Joel Elston, K9TBD

"All I Want for Christmas"

Since this is the holiday season for many faiths, these are some of my dreams!



All I want is Fiber to the Home. What's Fiber? Why do you wish it?

This is a wish sorta like, I want a holographic doll that dances on my table, she is three inches tall, living color, and sings. That was 1970, she was alive then - but not the wish of everyone - Economics prevailed! We (consumer) did not see that technology in our homes.

Today we have the opportunity to have an overwhelming communications technique delivered to each home. We as amateurs have tasted some of these fruits of technology - satellite communications, packet radio, ATV. We chat on a 1200 baud link for the most part - with some traffic handled at 9600 (8x faster) but why settle for these slow speeds? Fiber is unlimited!

Our current technology cannot pump the light pipe fast as it can handle the information! Light pipes in current use send data (pictures, data, voice, FAX) at typical speeds of 10Mbps (that is nearly 1,000 times faster than our current packet communications). The next step is 100Mbps. The next step - unlimited.

What will all this speed in communications do for you? Imagine, - a single 'light pipe' coming into your home carries 100 full video channels (6 Mbps each), all the FM/AM stations every dreamed up, the entire HF, VHF, and UHF spectrum, your Video Telephone, automatic banking, consumer services, shop by mail, home security surveillance, it goes on and on. Maybe there should be two light pipes in case one breaks.

A few years ago, I spent hours - 'reading the news' and sometimes offering some pictures on 45 Baud RTTY. One the best pictures (pix) is "The Girl with the Candle". A beautiful rendition of a little girl looking longingly for Santa. It took me three tries at three hours each to get that Teletype picture perfectly. Lake Placid (olympics in whatever year - I forgot) was a three ply six panel picture that took two entire weekends. "Blue Boy" was never completed. Today, with ordinary communications systems which are used in business, these would take between five minutes to an hour at 10 MBPS. Tomorrow, with fiber to the home - you have these artistic offerings nearly at an instant! Really! Really!

Ok, what would I do with my Christmas wish (fiber in the home)? Rather, what would you do with that capability? First, I would like to extend my offer to be a pilot installation for any company enterprising enough to seriously consider putting fiber into the house in this decade. I would certainly exploit its capabilities! Here is what I would do.

o Pipe TV into all of the family gathering points via fiber - The rest of the family can watch anything they wish without RFI from my station!

o Every computer in the house (about six right now) would be piped up in a local area network (so local it is only in the house) so that all share the hours of organization of data that I have done on a single computer. This would provide almost instant 'Encyclopedia' - though not as good as the printed page - for the entire family.

o Outbound communications would be also connected so that the current one or two second world-wide keystroke delay (on a character basis) becomes a one or two second full color image delay - then when technology catches up - live video anywhere in the world. Today I correspond on a regular basis through the internet network via keyboard with friends and relatives throughout the world but tomorrow, I'll pick up my microphone and set the lighting effects on the local video pick-up and chat with a friend - 'live' in Mauritania or wherever.

o Totally unimagined things will happen. 'Big Brother' may watch, but I think that the general populous is too aware to let that happen. After all, 1984, came and went. The 'computer has come and gone' in the vestige of a computer. Now it is an integral part of our lives - from dishwashers to watt-meter-readers.

What I want for Christmas, is a fiber here in my house so I can explore the 'Information Revolution' first hand, in real-time. Dream of Sugar Plums.

73 Joel, K9TBD

MERRY CHRISTMAS FROM THE STAFF OF THE *W3OK CORRAL*

** CONTEST CALENDAR **
by Barry, KU3X

Dec. 6-8	ARRL 160 Meter Contest
Dec. 8	W1AW Qualifying Run 10-60 WPM
Dec. 14-15	ARRL 10 Meter Contest
Dec. 15	ARCI QRP CW Sprint
Dec. 26	W1AW Qualifying Run 10-60 WPM
Dec. 31-Jan. 1	Straight Key Night
Jan. 4-5	ARRL RTTY Roundup

With the holidays around the corner there is still room for contesting. Looks like there is a lot of CW operating this month.

The ARRL 160 Meter contest is always a lot of fun. That's my favorite band. If you are not on 160 meters yet, you don't know what you are missing. Try a loaded quarter wave sloper off of your tower. If you are not sure what I mean or you need a little bump in the right direction, give me a call on the repeater. I'll give you a few ideas. With only a sixty foot long antenna you can get 5 by 9 reports from W6's.

Good luck, good contesting, and you all have a happy and safe holiday.

de Barry, KU3X

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TIS THE SEASON
by Lori, N4ZCF

This month, MARS is highlighting Operation: Holidays - a public relations campaign promoting the use of radiograms by the general public.

Both the National Traffic System (NTS) and MARS are available for the sending of messages. Most of the public doesn't know that either service exists. The public needs to know that both the NTS and MARS are up and running and are very capable of carrying messages to and from loved ones. The ultimate goal is to develop such familiarity with the two traffic systems that the sending of radiograms becomes a natural ingrained habit for people everywhere.

This is where our Delaware Lehigh Amateur Radio Club can enter the picture. We have traffic handling operators representing both systems, especially in MARS, including KO3M, W3BI, W3CJI, K3YD, WA3HVR, W3LPB, WA3VHL and WA3ENE. We have the capability of informing the public about the availability of the free and reliable services offered by amateur radio. DLARC members also have the capability of referring the public to the appropriat optimum levels -skills that are developed for use in times of public emergency or disaster.

We have an obligation to the public served by amateur radio. Only an informed public, using the services available to them, will know that amateur radio is an important service. Only an informed public can help to protect the amateur bands from being usurped by other users. Only an informed public can influence legislators and regulators in our favor.

Only the amateur radio community can get the word out to the public. Act now! Talk to your family, your friends, your neighbors. Write letters to the editors. Submit news items. GET INVOLVED! The future of amateur radio may well be at stake. Have you sent a radiogram lately? Why not? It's an excellent way to keep in touch with friends. All you need is a complete address and 30 words. Most people are surprised at how much can be said with 30 words. Try it. You'll like it.

Lori/N4ZCF/AAM3PR FL

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DLARC HELPS IN HALLOWEEN PARADE
by Carl, KA3TEQ

As in the past few years the hams of Delaware-Lehigh Amateur Radio Club again generously helped to provide the communiations for the Emmaus Halloween Parade on October 19th.

I had no trouble recruiting the six operators that were requested for the event, and they all expressed their willingness to participate in the next years parade. The weather was great, the temperature was mild with a slight cool wind, but that did not effect any of the operators due to the fact that we were in our vehicles with the heaters turned on.

The parade was well organized by the Emmaus Halloween committee. In attendance was the Robert Bastian the Mayor of Emmaus.

My XYL Marcia, Rick Kromer, AI3D, and I attended the last two meetings of the parade committee and this helped in organizing the communciations.

Last but not least, many thanks goes to the oeprators for the parade:

KA3MTY-PAUL; N3GRH-DAVE; NOKIA-PAUL; N2MWQ-JOHN; AI3D, RICK; KA3TEQ-CARL and XYL, Marcia.

de Carl, KA3TEQ

HAPPY DAYS
MIR--RADIO FUN IN THE SKY
by VICTOR, N3IQD

It all started when I read an article two weeks before I got my ticket in the mail. I had read an article that said in no uncertain terms that FM space communications was possible even on a two meter rig with a small amount of power and so my quest to talk to the stars began. At first I met with opposition from the hams I talked to that were into space communications. They were into it full bore and I had to find a way to do it "just like in the books".



So I dug up the books and found them to be mostly about packet contacts so I set my sights on U5MIR-1. I was amazed the first day I tried the bird gave me busy signals one after another and that was with only 30 watts, then my friends GENE and DENNIS, KA3UIU and N3HKX had said that they had heard the cosmonaut on voice in the early morning passes, this built more anticipation in my spirit.

Everything was in readiness, I had set my terminal to beep to warn me of the bird when it came into view of my station antenna and started to clean up around the shack. Then it happened the terminal began to beep and beep I rushed over and to my delight I saw the call U5MIR-1 scrolling up my screen. I suddenly became all thumbs as I scrambled to get to the keyboard to try for a contact; then it happened. Through the speaker of my ICOM 28A, I heard a voice with a heavy Russian accent. It is really amazing how hard it is to change mike connectors when your heart is racing and you really cant think.

Finally after much to-do I got the plug in and the Serge was in QSO with a W8MIR and he was just ending it. After that I waited and heard him giving out RST reports. I waited for him to finish one and inserted my call.....A pause that seemed an eternity passed and yet another eternity and then it happened. The voice came back "N2IQD your 5-9". What?!!! I quickly jumped back on the mike and with new fervor repeated over and over "N3IQD N33333IQD" I released the mike again and Serge responded "N3IQD you are 5-9". What a relief he did hear me and all was well with my contact. I don't know if I'll get a QSL card or not but the thrill of my long awaited space contact will live in me as long as I live. de Victor, N3IQD....

JAMBOREE ON THE AIR
CLUB MEMBERS HELP
by KA3WJF, Bob & KA3RBH, Bill

A group of boy Scouts from Troop 17, Palmer Township, participated in the 34th Jamboree on the Air (JOTA) on October 19th. Plans were to work from W3OK, the club station but upon arrival at the station, it was learned that the antenna system was down!

The scouts were given an Antenna Safety Lesson when we removed the fallen antenna leg from some telephone lines. Their knot tying abilities were used in securing off the leg to the side of the county garage. After chipping in for this "good turn" the group went to the KA3WJF's shack for some QSO's.

A Y54 was worked first and then the scouts engaged in two ragchews with bobcats, wolves and bears (cub scouts) in Kansas and Arkansas. Ten meters was noisy and their shy voices didn't help. They soon learned the value of the phonetic alphabet and "Q" signals.

KA3RBH explained propagation and they experienced its vagaries when we could not keep our sked with WD5BRP (in Denver), although other 0's were being worked.

Although this was a small effort, it was great and everyone enjoyed themselves. Some of these scouts have attended DLARC Novice classes but no new licenses have resulted. However, I think that we produced a couple of new amateurs "down the road". Sometimes in scouting you don't see the results of your efforts until years later.

SCOUTING AND HAMING..."PERFECT TOGETHER"

MAIN QSO PARTY
by Ray, W3TDF

As a result of having worked a OM/XYL team during the PA-QSO Party, and they in turn wanting Greene Co. QSL's, they also sent me an advance notice for the Maine QSO Party. It is scheduled for the first weekend of February, which may also be the same weekend as the VT/NH Party.

Anyway it is similar to ours, Sat. 1:00PM to 11:00PM, and Sun. (Feb 2) 7:00AM to 7:00PM, that's E.S.T. More later; de W3TDF

JUST THE MINUTES

by Chris, NU3L, acting secretary

The meeting which was held on November 7, 1991 was called to order at 0730 by President Robin Moseley (WA3T).

KU3X presented all band ssb award to N3IGA.

A letter of thanks from the Wheelmen with A donation of 100 dollars was received by the club for having provided communications at their event.

KA3TEQ reported on the Emmaus Halloween parade communications effort handled by the dlarc. A thank you note was received from the Borough of Emmaus. KA3MTY, N3GRH, NOKIA, N3MQW, AI3D, KA3TEQ, and Marcia Ettle participated.

K3GQJ is doing well and will try to make next meeting.

Bob Mulrooney, KB3RI, is in the hospital. It was suggested to send cards. There will be a VE testing session on November 8th. Novice classes are going well. Four individuals have passed so far. If sufficient interest is found general classes will start in January. Committee reports: RFI - WA3T pointed out this organization is not intended to bail out people who have gotten themselves into serious problems; it is intended as a prevention so get help as early as possible.

W3TDF reported that a new tower which was donated to the club will be ready for field day.

Our claimed score for the PA QSO Party is 1.92MM points. The annual club fund raising raffle will be chaired by W3TDF, Ray and N3GXW. Suggestions for prizes are needed.

W3TDF moved that the minutes of the October meeting be accepted as printed in the newsletter. The motion was seconded by N3IGA and passed. The treasurers report was given by KA3MOU. The balance is $3369.95. A motion to accept was made by W3PYF, seconded by W3TDF and passed.

WF3H reported that the DLARC will host a group of Cub Scouts on November 23 at club station for an HF and packet demonstration. These will be prospective students for novice classes.

WF3H reported that the Christmas City station will operate 9am to 9pm on December 21 and 22. Volunteers are encouraged to sign up soon. A 1 hr minimum commitment is requested.

WF3H also reported on a proposal for a hamfest. The planning will be done in 2 phases. Phase 1 will be exploratory to find people commitment and set operating committees. Phase 2 will involve a modular task force which will include publicity, dates (target is late August), vendors, food vendors. About 30 people will need to make firm commitments if this is going to work. That is the critical number which will determine the clubs interest. Ideas are need for a location. Get you ideas to Bob. W3TDF commented that we will need 20 minimum to run the actual event.

W3PYF asked for new contributors to the club newsletter The W3OK Corral. Copy must be in his hands by 12th for mailing to printer by the 15th of the month. The 50/50 drawing was won by KD3TI.

K3ANS reported on upcoming programs. December will be NTS, January is SKYWARN, and February is Tom Daniels on satellites. Guests included Chris, KA3YFK/KT and his Dad, N3IVB.

The program for the evening was everything you always wanted to know about connectors and how to install them presented by KU3K and KU3X with strong participation from the rest of the members.

Respectfully submitted by Chris, NU3L.

NOVEMBER VE TESTING

by Robin, WA3T

At the November 8th session, 14 candidates took a total of 21 elements. There were three upgrades and six new licences, including...
Upgrade to Extra:

Victor A. Tropiano, N3IQD
Beorn B-W Sunflower, N3KAQ

Upgrade to Technician: Jeffery Frantz, KA3ZIZ
New Technicians:Robert G.Babcock, Catherine M.Kichline, Karl T.Kichline, Matthew D.Kylen, Lance K.Mastrov, Stanley C.Shrope, Jr.

The VE team at this session included: Bill Newman, NS3J, Glade Schroeter, WA3MVQ Hank Smith, NX3R, and Robin Moseley, WA3T.

The next session is on December 6th; team 4 will be attending.

de Robin, WA3T, Team Laison Alternate

STILL LOOKING!

N3GWR, J.P. is still looking for some used sections of Rohn 25..If you have any call him at 987-3697.

" NICAD BATTERIES - FACTS AND FALLACIES "

Compiled by N3FOA from various sources

Rechargeable nickel cadmium batteries, have, with reasons, become a popular source of power for portable and hand-portable equipment. They can provide reliable service over many years if due account is taken of their peculiarities. Yet it remain true that many amateurs are failing to appreciate not only the full capabilities but also the limitations of nicad cells used in battery packs.

1) "Rapid charging causes a decline in cell capacity".
NOT TRUE provided that the charge is always terminated at a safe point.

2) "You should not charge only partially discharged cells as this causes a loss in capacity."
NOT TRUE. It is not necessary to discharge fully nicad batteries before charging. In fact, **THE OPPOSITE** is true. Repeated partial charging gives an increase in the number of charge/discharge cycles compared with full-discharged cells.

3) "White crystals growing on the tops of nicad cells mean that the seal is faulty and the cell should be scrapped."
NOT TRUE. The electrolyte (potassium hydroxide) is extremely searching and can penetrate the seals used in minute quantities. These crystals are potassium carbonate, which is harmless and can be removed with soap and water. The action of the carbon dioxide in the atmosphere reacts with the electrolyte to form the crystals. After removing the crystals, it is recommended that a smear of silicon grease is applied to slow down the growth of new crystals. The amount of electrolyte lost in this way is insignificant.

4) " I have a cell which appears to take a charge, but after the normal charging period the open circuit voltage is very low. I have been told I should throw it away."
NOT TRUE. The reason the cell won't take a charge is usually due to minute crystalline growth across the internal electrodes, caused by prolonged storage. A cure that nearly always works is to pass a very high current for very short time through the affected cell. This fuses the internal "whisker". Discharging a large electrolytic capacitor is one method of doing this. But note that in a battery the faulty cell MUST be isolated from the other cells since zapping the complete battery will not usually result in a cure. Charge the capacitor to about 30v and then discharge it through the faulty cell. Several attempts may be required to clear a stubborn cell.

5) "A battery contains a cell with reversed polarity. The only cure is to replace it".
NOT TRUE. The reversed cell can usually be corrected by a similar technique as that given for 4). After re-polarizing the cell, the complete battery can be recharged in the normal way. Full capacity can be regained after about five cycles.

6) "A nicad battery should be stored only in a discharged state".
NOT TRUE. It can be stored in any state of charge. Due to its inherent self-discharging characteristics it will eventually become fully discharged after a sufficiently long period of storage. To recharge the battery before returning it to service, a "conditioning" charge of 20h at the normal charging rate is recommended. Afterwards charge normally; full capacity can again be expected after about five cycles.

7) "It is not advisable to keep a nicad battery on permanent trickle charge as this causes permanent degradation of the cells".
NOT TRUE. So long as the trickle charge current is adjusted correctly, the charge can continue indefinitely without loss in cell capacity. The safe current can usually be obtained from the manufacturer's data, but 0.025C is a reasonable guide (ie. about 100mA for a 4Ah cell and PRO-RATA). This enables the battery to remain fully charged.

ZS5JF also lists seven safety points that should be considered by users:

1) **DO NOT** short circuit a fully-charged battery. This if prolonged, can cause excessive gas production with the danger of possible rupturing of the sealed case.

2) Nicads contain a caustic electrolyte: this is perfectly safe as long as common sense is used in use and handling of the cells.

3) A nicad can supply a very high current for a short period (a 4Ah cell can supply over 500A for a few seconds). Sufficient thought should be given when selecting a fuse between the battery and the equipment. The connecting wire should be capable of passing enough current to ensure the fuse blows quickly in the event of a short circuit.

4) **DO NOT** use partially-discharged cells with fully-charged ones to assemble a battery. Assemble the battery with all the cells discharged and then charge them as a battery.

5) **DO NOT** carry a fully- or partially-charged battery on an aircraft without taking proper safety precautions. A short-circuited battery pack ca be a time bomb in such situations. Consult the relevant IATA regulations or ask at the airline check-in.

6) **DO NOT** subject battery packs to very high or low temperatures. Never dispose of a battery pack in a fire or throw it out with domestic waste. If it cannot be disposed of properly it is probably best to bury it in the garden in a safe spot.

7) **DO NOT** discharge battery packs below about 1V per cell, otherwise there is a possibility of cell reversal.

73 de
Gian MODA , I7SWX
Digital Equipment SpA
BARI - Italy

Editing By N3FOA, Sam White



SNYDER'S LAWS

[1]It is a simple task to make things complex, but a complex task to make them simple.
[2[Those who feel it is OK to tell a little white lies soon go colored blind.

REMEMBER: THIS MEETING IS IN KIVA HALL BEGINNING AT 7:30 PM ON DECEMBER 5th.



REPEATER ETIQUETTE 102

by Robin, WA3T
President DLARC

Amateurs are just like any other social group: in order to be fully accepted, a newcomer has to be willing to accept the customs and traditions of the group.

It may be easier to illustrate this through another hobby. A newcomer to sailing, no matter how good a sailor or how well equipped, would find it hard to be accepted by the old-timers if he insisted on calling a certain part of the boat "the pointed end"!

Just like sailing, ham radio has its "insiders'" jargon and customs, built up over many years, which distinguish a ham from operators of other radio services. Some of these may seem silly to a newcomer. Why would hams call each other "old man"? Why would they say "73" instead of "best regards"? These and similar sayings and operating practices go back many years. Right or wrong, they are our tradition.

CB has its traditions, too; "good-buddy", "10-4" and the "base station". There is nothing wrong with these phrases; they tell a fellow CBer "I'm one of the group". There's nothing wrong with CB, either, if it's used within the law. I have a CB in my car, and use it from time to time. But if I were to use ham operating practices and language on my CB, I would be laughed at.

Using CB terminology on the ham bands isn't "wrong", and it certainly isn't illegal, but it makes listening hams wince, just like sailors hearing "the pointed end". It says "I'm not one of the group". What makes matters worse is that although most CB operators are courteous, a few are notorious for operating illegally and unpleasantly. Unfortunately they drag down the reputation of the good CBers, so that many hams take "CB lingo" to be the mark of an inconsiderate operator. Unfair, perhaps, but that's the way it is.

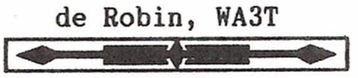
So how can a newcomer "learn the ropes", and blend in with his fellow hams? What are the rules?

First, there's the law. Remember that we are limited by the terms of our licenses to technical and social conversation, and we may not use amateur radio to avoid paying for toll calls. Using the repeater for business purposes jeopardizes the repeater license as well as the license of the individual ham. So, please, no business. (And NO "smokey reports"; they're doubly illegal!) Second, there's Repeater Etiquette 101; not interfering with other repeaters, keeping it short or moving to simplex or a less used repeater, and basic conversational courtesy. A busy repeater such as 146.70, with emergency patch facilities intended to be used by hams passing through the area as well as local hams, is monitored by many hams throughout the day, ready to provide help where needed. They deserve better than to have to listen to long monologues about nothing in particular.

Beyond the basic courtesies, it's a question of listening, to learn the conventions and customs. Just to make life for the newcomer more difficult, repeater customs are somewhat different from those on the HF bands. On the HF bands, we call "CQ" when looking for a contact with any other station. This is never done on a repeater. To see who is on the repeater and wants to talk with us, we just give our call and perhaps the frequency. Why? Calling out the frequency makes sense; hams who are scanning several of the local repeaters need to know which one the caller is using. But why no "CQ"? On the HF bands, which are not channelized, we need to give listeners a chance to tune us in, so we call "CQ". But on a repeater, listeners are either on-frequency or they are not. If they're listening, they only need to hear a callsign to decide whether to start a conversation with the caller.

This advice is not intended to scare the newcomer off. On the contrary, it's intended to make it easier for newcomers to quickly feel at ease on the repeaters. All club members should feel free to use the '.70 and '.511 repeaters, and to initiate conversations or join existing conversations just as they would face to face.

de Robin, WA3T



WHEN JOINING OR RENEWING YOUR ARRL MEMBERSHIP, LEAVE OUR TREASURER, KA3MOU DO IT FOR YOU. OUR CLUB BENEFITS FROM THIS. YOU CAN RENEW YOUR ARRL MEMBERSHIP AND PAY YOUR ANNUAL DUES WITH THE SAME CHECK.!

YOUR CLUB DUES ARE DUE BY DECEMBER 31ST

All Amateur Radio Operators are invited to participate in the DLARC, RACES & ARES nets on 146.70 W3OK/rpt 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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* **DLARC INFORMATION LINE 820-9110** *

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CLUB OFFICERS

President - Robin Mosely.....WA3T 215 820-0944
Vice President - Ann Keiser..KO3M 717.386-2797
Secretary - David Blankenship.N3EYT 215 974-8749
Treasurer - Richard Dech.....KA3MOU 215 837-1585

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****

STAFF

Editor - Clarence Snyder.....W3PYF..252-2109
Technical Editor - Wm Van Horn..,K3CP...691-5979
Digital Editor - Joel Elston.....K9TBD..252-1515
Yankee Doodlings - Blair Bates...K3YD...865-0687
Circulation - Dick Peischl.....KC3CR..759-0294
Mailing List - Clarence Snyder...W3PYF..252-2109
Printer - Norm Zoltack.....K3NZ...799-4044

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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 the Northampton County Community College

TALK IN ON 146.70

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Any comments or articles contributed to this newsletter should be addressed to

CLARENCE SNYDER W3PYF, Editor
717 PORTER STREET
EASTON, PA 18042-1548

The W3OK CORRAL
RR 4 Greystone Building
Nazareth, Pennsylvania 18064-9211

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