

DELAWARE LEHIGH AMATEUR RADIO CLUB Inc.



W3OK

CORRAL

DECEMBER 2009

**Club Meeting December 3rd
At The Nancy Run Fire Company**

UP COMING EVENTS

**December 12th & 13th - Christmas City Special
Event Station "WX3MAS"**

HAVE A JOYFUL HOLIDAY SEASON

MEETING PROGRAM

"Annual Christmas Party!" Put your diet on hold for a few hours while we enjoy each other's company and share homemade delectables at the big table. Bring a dish or dessert, and a few copies of your recipe along with your appetite and sweet tooth.



FROM THE PRESIDENT'S SHACK

DLARC - many operations, many hands

Over the last month I have been reviewing the various DLARC functions and committees. I found the scope and level of involvement surprising and I thought that I would share it with you.

DLARC Operations & Managers

Officers: N3SQD / George, KB3CTX / Ben, NL7XM / Pete, KB3RTB / Howard

Board Members: W3CE / Al, N3INJ / Jon, NE2C / Bob, N2OFF / Vic, N3OW / Jay, KC3II / Don

Newsletter: KC3II / Don

Web Site: W3JXQ / Brad

Club Station Trustee: KA3JWE / Don

Repeater Messages: KA3MOU / Dick

Repeater Maintenance: N3NVA / Barry

County Radio Officer: W3CE / Al

Public Relations: KE3AW / Bob

Milk-house Supervision / Mentor: N3IYX / Ken

Milk-house Representative: K3GMT / Dave

Nancy Run Firehouse Liaison: AA3OU / Ed

Field Day: KB3IUE / Tom

WX3MAS Special Event: KB2VCI / Louis, KB3PDL / Doreen

Fox Hunts: W3CE / Al

2M Sprint: W3TDF / Ray

Membership Chairman: N2OFF / Vic

Awards Chairman: W3OPA / Charlie

Meeting Program Chairman: NL7XM / Pete

MS Walks Chairman: W3OPA / Charlie, KB3RTB Howard

MS Bike Ride Chairman: AA3WM / Bryan

Club Picnic: W3CE / Al

Emmaus Halloween Parade: KE3AW / Bob

Lehigh Wheelmen Bike Ride: W3CE / Al

VE Liaison: N3SQD / George

Class Coordination: KE3AW / Bob

Class Instructors: NU3L / Chris, W3CE / Al, N3SQD / George

Interference Committee: KB3CTM / Ben, W3CE / Al, N3SQD / George, N3IYX / Ken

Contests: W3OPA / Charlie, K3GMT / Dave

Antennas: Barry / KU3X

Satellite Communications: N2AUO / Gary

As you can see this is quite a list. And, it just describes the framework of the club. I really should include the dozen or so Wednesday night net control operators, the volunteers for the MS Walks, Bike Rides, the demo stations for the Libraries, the attendance at the EMA expo, and the operators for field day, the PA QSO party and other contests. Even with all this, I suspect that I missed someone. There are two points that I would like to make from this overview.

The first is that the club has a lot to offer (Community service, recreation, club station, education, testing, mentoring, support). This is possible because a whole lot of people have pitched in to improve the club and make it successful. Many of the people supporting the club may not make many meetings, but quietly and persistently do their part. We should not lose track of the fact that the DLARC is very much a collaborative effort.

The second point is that there are many opportunities to be a part of this collaboration. For example KB3TAE / Tracy, has discussed being the QSL manager for the club. This is a position we don't currently have, but is needed. Many times members think they would be unqualified to be a chairman or run an event. If you think you'd like to chair an existing event, consider working with the existing chairman and co-chairing the event. It's a great way to see what is involved, and will take some burden off of the chairman. Also, I am not aware of any chairman that wants to hold the position "for life". Most would welcome the opportunity to train someone and then "pass them the reins". If you would be interested in starting a new activity, seek out a chairman of a similar activity or a board member and we can look into making it happen.

I am keenly aware of just how many demands are made of us. Job(s), home(s), a spouse, ex-spouse(s)!,

kids, car(s) - the more of these you have (or have you) the greater the demands. But, I am certain, that if we do what we can for the club, when we can, it will continue to be a success.

My thanks to all the above and others that make the DLARC possible. I look forward to seeing you at the December club meeting & Party (Dec. 3rd, 7:30PM, Nancy Run Fire Company).

73 de N3SQD / George



MINUTES FROM THE NOVEMBER 5th MEETING

A general membership meeting of Delaware-Lehigh Amateur Radio Club Inc. was held at Nancy Run Fire Co. in Bethlehem Twsp.,

The meeting convened at 1930 hrs, President George Wieland / N3SQD

Pledge of allegiance: Led by George / N3SQD

Members in attendance: 41

Approval of minutes: Motion was made by Gary / N2AUO, and seconded by Dave / K3GMT - **Motion carried**

Approval of Treasurer's report: Motion was made by Tracy / KB3TAE, and seconded by Ken / N3IYX
Motion carried

REPORTS

Web site: Brad / W3JXQ was not present, Comment was made about making the club mailing address more easier to find on the web site

Repeater: No report

VE session: There will be an VE session on Nov. 6 2009 at the 911 center at 6:45 pm

Tech classes: Bob / KE3AW gave a report on the current class and that the next class will be in the early spring.

Events: WX3MAS will be on December 12-13 2009, it will be run from the milk house and the 2nd floor of the Graystone building. Everyone is encouraged to attend

The next monthly meeting will be our Christmas party, it will be held at Nancy Run Fire Co.

Membership: As of 05 Nov 2009 the club has 211 members, Report given by Vic / N2OFF.

Members to be voted in Ron / formerly WN3DQB, and John / KB3EOJ. Motion was made by Dave / KA3IWC, second by Jay / N3OW. **Motion carried**

OLD BUSINESS: Pete / NL7XM needs the logs for the PA QSO party so they can be submitted

NEW BUSINESS: February meeting will be an mini ham fest, there will be a small fee for the table and no item will over \$100.00

As of November 5 2009, 18 Entertainment book have been sold and this will be the last month to get a book

Ben / KB3CTX needs a copy of all passwords for anything pertaining to the club

Louis / KB2VCI and Doreen / KB3PDL will be taking over the ordering of the polo shirts

Adjournment: The meeting was adjourned at 1957 hrs by George / N3SQD

Respectfully submitted by **Howard Miller / KB3RTB**, Secretary

WEDNESDAY NIGHT NETS

Additional Net Controls are needed for the Wednesday Night ARES, RACES & DLARC net. If we have enough interested operators, it will only be necessary for each operator to have only one net session in each three month period. Actually 13 weeks in a period, so 13 net controls would be ideal, and maybe some extras to fill in if needed. This would give us a pool of experienced controls, for any emergency which would arise. Interested operators should contact Don / KC3II at kc3ii@arrl.net. The NIMS IS-700 and ICS-100 courses are not required to be a net control, but should the need arise and we do supply controls and operators for real emergencies, then the courses requirement will be in effect and EMA issued IDs will be needed to be on the scene of an emergency.



OCTOBER 2009
D.L.A.R.C. EXPENDURE REPORT

Expenditures:

Postage	74.00
Award Plaques	73.68
Telephone	<u>17.68</u>

Total Expenditures: **(165.36)**

Respectfully Submitted,
Pete Varounis / NL7XM
Treasurer / D.L.A.R.C.

DECEMBER 2009 QUICK CHECK CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2 DLARC RACES/ARES Net (KC3II)	3 DLARC MEETING	4 NO V.E. SESSION	5
6	7	8 D-Star Net 147.165 1900 Local	9 DLARC RACES/ARES Net (N3SNZ)	10	11	12 WX3MAS Weekend
13 WX3MAS Weekend	14 Newsletter Articles Due	15	16 DLARC RACES/ARES Net (W3BUD)	17 Executive Committee Meeting	18 Newsletter goes on the Web Page	19
20	21	22 D-Star Net 147.165 1900 Local	23 DLARC RACES/ARES Net(KB3MHY)	24	25 MERRY CHRISTMAS	26
27	28	29	30 DLARC RACES/ARES Net (KR3U)	31		

DECEMBER CONTESTING AT THE OK CORRAL



December 5th & 6th – ARRL 160 Meter -- CW
 December 12th & 13th – ARRL 10 Meter
 December 19th & 13th – OK DX RTTY Contest
 December 26th & 27th – DARC Christmas Contest



VE TEST SESSION

There will not be a test session this month. The next session will be January 8th at 7:00 PM at the Northampton County 911 Center. Pretest registration is required. Contact George / N3SQD at george@bioserv.com or Al / W3CE at w3ce@arrl.net.

CHRISTMAS CITY SPECIAL EVENT STATION

Again this holiday season, the DLARC special event branch, “**The Christmas City Station**” will be on the air. Over the weekend of December 12th and 13th from the Milk House and Graystone Building with the call of WX3MAS. This our way of celebrating Christmas and wishing other hams around the world a “Merry Christmas” from the twin Christmas Cities of Nazareth and Bethlehem. Lou / KB2VCI will again chair this event and is looking for support from the general membership. Operators will be needed man the radios during the on air period. Lou did a good job last year, even with equipment failures, but volunteers are needed to continue our tradition. A sign-up sheet will be at the December meeting.

THE AMY ZIMMERMAN AWARD

PURPOSE;

Ham Radio-related humanitarian act, deed or service that benefited the community. This award was originally conceived as a memorial to Amy Zimmerman for her service in the community and amateur radio.

- a. Qualifying act, deed or service should benefit those outside of amateur radio. (example: hams working with non-hams)
 - b. A single extraordinary act, deed or service could qualify. (working the 9/11 disaster)
 - c. Qualifications should not include normal everyday operating or contesting.
 - d. Qualifications should not include being an event chairperson of a single event every year.
1. An individual may receive the award more than once, but not for the same reoccurring act, deed or service. Multiple awards will be given for cooperative efforts by any members.
 - a. A description of the act, deed or service which qualified the individual or individuals for the award must be entered into the Executive Committee minutes
 - b and the minutes of the general club meeting at which the award was presented.
 2. Only DLARC club members in good standing are eligible for the award. They must also have been members of the club at the time they performed the activities for which the award is being presented.
 3. The award is to be considered and reviewed each year, but may not necessarily be presented each year if there are no qualified candidates.
 - a. A three person committee is to be formed each December by the executive committee consisting of the past president and two club members at large.
 - b. The committee's function is to determine candidates who qualify for the award (either through suggestions from other club members and/or their own deliberations) and present them to the executive committee at the January executive committee meeting, as potential recipients. The executive committee may add or subtract from the committee's list of nominees the name of any qualified club whom they believe does not meet the eligibility requirements of the award.
 - c. The award winner will be decided by a majority vote of the executive committee.

The award consists of the following:
The Amy Zimmerman Plaque and a press release to the ARRL and local news agencies .

“AMY ZIMMERMAN AWARD”

Please fill out this form and nominate your choice for The Amy Zimmerman award. The award will be chosen from these nominations by the award committee. The award committee will present their recommendation to the Executive Committee for final approval. The award will be presented at the March general meeting. Return this form to any Executive Committee member.

I nominate _____

for the Amy Zimmerman award. Because: (Use additional pages if necessary)

MONTHLY BRAIN TEASER

"A special prize awaits the first Club Member to submit the correct answer to this month's Brainteaser to the Treasurer via E-mail. He must be present at the next Meeting to receive it, or it goes unrewarded. Officers, Board members, and Brain Teaser Authors are not eligible to win."

de NL7XM

NOVEMBER BRAINTEASER ANSWER

In all of the words listed, if you take the first letter, place it at the end of the word, and then spell the word backwards, it will be the same word.

The winner is Rich / N3UB



DECEMBER BRAINTEASER



What's the Missing Component?

Video game designer Bob Wheels needed an inexpensive, counter-clockwise rotation detector. An optical rotation sensor he tried was too fragile to last long in the busy hands of a teenaged game player, as he realized while watching his son play with a radio-controlled car. That experience also gave him an idea for a simple rotation detector that can withstand lots of punishment.

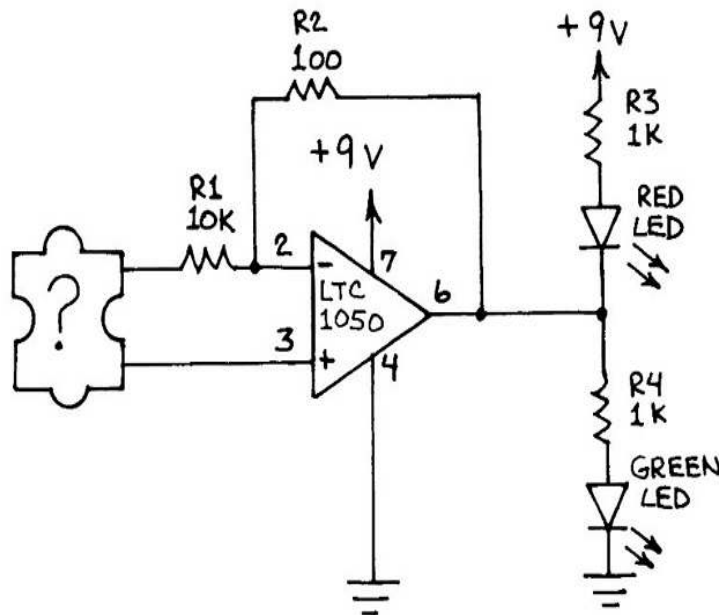


Figure 1. Simple rotation detector.

What is the component concealed behind the puzzle piece? Here are some hints:

Figure 1 shows a test version of the circuit designed to detect rotation. The LTC1050 op amp is connected in its single-supply mode.

When the rotation detector is not rotating or is rotated in a clockwise direction, both LEDs glow. Only the red LED glows when the rotation detector is rotated in a counter-clockwise direction.

The rotation detector has only one moving component. It is unaffected by light.

What is the rotation detector behind the puzzle piece?

NEW MEMBERS

Come out and greet the latest newcomers to the DLARC. Shake their hands and welcome them to our club. John Barbaz / KB3EOJ and Ron Unger /formerly WN3DQB

OCTOBER BRAINTEASER WINNER & ANSWER

The winner of the October BrainTeaser was Tracy / KB3TAE, who correctly identified the the sailor as Ray / W3TDF.



William N. Goodman, CPA

**Certified Public Accountant
Licensed Insurance Agent
Mortgage Loan Officer**

K3ANS

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YOUR AD COULD BE HERE

**Your business card here for a
ridiculously
small monthly fee. A space this big is
available for a listing, like the ones
above and to the left.**

**For more information contact Pete /
NL7XM at nl7xm@arrl.com**

REPORT FROM ARRL EPA SECTION

Operating a two-way radio mobile in Philadelphia may cost you \$75 a pop beginning December 1 thanks to a new cell phone law in effect in the City.

While the purpose of the law is to discourage the use of cell phones while driving there is a clause which prohibits the use of a wireless communication device for voice communication while operating a motor vehicle on any street in the City. Hands free operation is permitted.

An article in the Philadelphia Inquirer quotes a 9th District Police Officer saying there are some exceptions to the new law. If your device is hands free. If you are calling 911. If you are using a two-way radio to conduct official business for the city, state, or feds. Otherwise the law says to put the car in 'park' or 'neutral.'

Local hams have been in touch with ARRL Volunteer Counsel to get their opinion of the bill. More information on the bill can be found in the Holmesburg Amateur Radio Club November newsletter at www.harcnet.org.

73, Bob / WA3PZO, EPA ASM & Eric / WB3FPL

MEMBERSHIP DUES ARE DUE!

By Pete / NL7XM

It's that time, already! DUES are payable for the calendar year 2010. Here's how easy it is to remit your club DUES and keep your valuable D.L.A.R.C. Membership current. Whether in person or by mail, **CHECKS made payable to the D.L.A.R.C.** are the preferred method of payment to more accurately record your timely renewal. Please ensure that your callsign appears somewhere on the instrument, such as in the memo field. Paying with cash is discouraged, but if you really, *really* have to, kindly make certain you are prepared with the correct sum according to the rate table shown below. Remember, if your DUES are not paid by February 1st, your membership will expire.

2010 DUES Rates / No Changes

Regular Membership 18-64 years of age:

Jan. - Dec.\$17.-

65 and over, or retired from all forms of employment (no age limit)

Jan. - Dec.\$12.-

Additional Family member
each \$3.-

Associate Individual Membership
\$10.-

You are strongly encouraged to MAIL your DUES so that I may conduct the bulk of the record-keeping duties apart from where I believe you deserve the most of my attention. In person at Club Meetings, I'd prefer to answer your questions, address your concerns, and welcome your thoughtful revenue raising and savings ideas.

Therefore, it is firmly advocated that DUES correspondence be mailed to:

Pete Varounis / NL7XM
P.O. Box 3026
Easton, PA 18043-3026

Enclosing a S.A.S.E will bring your new membership card back to you immediately if you can't attend the next Meeting where they are routinely distributed. You may write to me anytime with questions regarding DUES, or to discuss issues that you believe are my responsibility at: nl7xm@arrl.net Include your phone number if you prefer a live reply.

de Pete / NL7XM DLARC Treasurer

HARD COPY SUBSCRIPTIONS

Due the increased number of newsletter hard copy requests, the escalating costs have made it necessary to establish a subscription rate of \$10.00 per year for hard copies. This rate is strictly for the mailed hard copies, and not for anything else. And with first class postage having increased in May, there will be an increase in that portion of the hard copy costs. Our club membership number no longer allows us to use bulk mailing, thus the first class postage requirement. That plus paper and printer supplies have to be covered since a member is doing the printing on his own printer. His costs have to be covered. To Subscribe contact Pete / NL7XM at nl7xm@arrl.net

4X4 AVAILABILITY

It is that time of year again, when we must prepare our four wheel drive listing for Northampton County EMA. These are the vehicles used to transport nurses from around the county to their respective hospitals in case of a snow emergency. Include in your information the seating capacity of your vehicle and a phone number where you can be reached. The phone numbers will not be given out for any reason. Contact W3CE at w3ce@arrl.net

NEWS FROM THE MILKHOUSE

Did you know that the Delaware Lehigh Amateur Radio Club operated a club station? Dubbed the "Milk House," it is located behind the Greystone Building (14 Gracedale Ave, Nazareth, PA 18064). It is the small building at the base of the tower. The Milk House is open every Wednesday at 19:00 local time and everyone is invited to attend.

Need an Elmer? The club members that gather at the Milk House are a diverse group and can probably help you solve a problem or provide you an opportunity to learn something new. Recent topics include Dstar (programming, messaging, TV, "Hot Spot"), contesting, software (contesting or general logging), digital mode operation, and antennas (building, buying, repairing).

Want to learn about Dstar? Have a Dstar radio you need to program? Want to learn how to send text messages and pictures using Dstar? The Milk House is hosting Dstar workshops each Thursday at 19:00. For info contact Dave at k3gmt@k3gmt.net.

The Milk House has four stations are in operation and all are connected to computers for rig control and logging. The list of radios include

1. Yaesu, FT-1000 MP
2. Flex-Radio, Flex-3000 (with digital mode capability)
3. Icom , IC-7000 (with digital mode capability)
4. Kenwood, TS-940

Stop by and put a few QSO's in the W3OK log book.

If you are interested in a casual and fun HF contesting experience stop by the Milk House for the ARRL Sweepstakes Contest, SSB. The contest begins 2100Z, Nov 21 and runs to 0300Z, Nov 23. Contact Dave, K3GMT (k3gmt@k3gmt.net) if you are interested. Anyone can work the contest regardless of license class. The Milk House participated in several recent contests (IARU HF World Championship, CQ Worldwide DX Contest RTTY, Pennsylvania QSO Party, CQ Worldwide DX Contest SSB.)

Here are the highlights of the CQ Worldwide DX Contest, SSB (0000Z, Oct 24 to 2400Z, Oct 25) The Milk House made a good effort using wires and 100 watts during the CQ WW DX SSB contest. Howard (KB3RTB), Ken (N3IYX), Dave (K3GMT), Brandon (KB3SXG) worked most of the contest. Bob, N3SNZ, stopped by on Saturday and Sunday and made a few contacts.

Friday afternoon we strung up a 90ft, 40/80 dipole, from a tree near the Graystone building and a tree near Penn Allen Road. We also used a full sized 20/40 & shortened 80 dipole strung from the barn to a tree in the middle of the lawn.

Friday was tough going with many overlapping signals. The big guns were working each other. Most of the activity was on 40 meters. We learned nuances of running "Split" on 40 meters. We also learned that if someone spots a station in the telnet cluster with both frequencies, N1MM (the contest software we were using) will automatically set the split on the radio.

Most of Saturday's activity was on 20 meters. The long wire on the tower works great on this band. There was activity on 40 meters during the day but not much. We ended the night early because we knew there would be more interest in the "Little Pistols" on Sunday.

Sunday morning we decided to string up another antenna so we could work 15 and 20 meters at the same time. We took down the 20/40/80, and put up a 15/20 dipole from the barn to the tower. This orientation did not did work well so we untied the end from the tower and moved it to the tree near Penn Allen Road. That did the trick. We worked 15 meters all around the world. In the afternoon 10 meters opened and we made a few contacts on the vertical.

We worked all continents and several islands. Here are a few highlights. Iceland, Australia, New Zealand, Japan (twice), Egypt, Russia, Morocco, St. Paul & Amsterdam Islands (Halfway between South Africa & Australia), Cape Verde Islands (West of the Horn of Africa), The United Nations station in Geneva, Galapagos Islands (10 meters), Hawaii and Alaska. We could hear many African stations but the pile-ups were huge. We gave up on these multipliers.

Our logs will be submitted and our score will be aggregated for the club.

de Dave / K3GMT, Club Station Chairman

Silent Key

*The D.L.A.R.C. Wishes to honor and to express its sadness
at the passing of a club member or former club member.*

RAY DENNISON / N3RBK

CHRISTMAS CITY, U.S.A. (WX3MAS) – FORTIETH ANNIVERSARY

by **Charles Lazarchak / W3OPA**

Ah, 1969.

The New York Jets win Super Bowl Three, and later that year the Miracle Mets win the World Series. The first Concorde is test flown and the U.S.A. puts a man on the moon. True Grit starring John Wayne comes out and it only costs 35 cents a gallon of gas to get there.

Also, that year in Bethlehem Pennsylvania, the Delaware – Lehigh Amateur Radio Club (D.L.A.R.C.) began a 40 year tradition of celebrating Christmas with the WX3MAS Christmas City special event station.

Bethlehem, settled by Moravians, is nicknamed the Christmas City. The city celebrates the season every year with a special post mark. The club wanted to share in the seasonal celebration with a special event station and send the reply QSL cards out with the celebratory post mark.



K3NZ (1969)

The board at the time thought they would approach the FCC with a request of a “special” call sign for the planned two week event. Believe it or not, the original request was for a 1X4 call, W3XMAS. In that request, they asked if they could not have the 1X4 could they have a variation of it, possibly W3XMS.

The FCC replied with special permission to use for two weeks WX3MAS.

The next hurdle was timing.

The idea for the event came late in the year and the club did not have time to get into the popular publications. The planned dates for the event were December 15th to January 1st of 1970, twenty four hours a day. The request to the FCC was dated November 3, 1969 with their reply being dated the 29th of the same month. A letter dated the 24th of November was sent to the ARRL, “Could we please be attached to the W1AW bulletin so Hams would know about the effort?” While noting that it would be a break with the way things are done, the ARRL agreed to add it to the bulletin noting the unusual prefix and the “human” nature of the event. The reply was dated December 5th.

WX3MAS was in business.

With twenty members operating the event, it ran for the scheduled time frame, although there were a few lost days due to an ice storm. This kept members at home and destroyed some antennas. The original QST article can be found on page 76 of the 1970 May issue. The title of the article was *Christmas City U.S.A.* written by Norm Zoltack K3NZ SK (former WA3FGS). Norm, a printer by trade, designed the original QSL cards as well. The article notes the WX3MAS committee which consisted of Norm (an honorary life member of DLARC) as well as Rick Saeger K3OO (former WA3GUL) who has become a premier contester and Al Wiemann W3CE (former WA3CXM) who just ended his run as president of the DLARC.

I asked Rick, who at the time was in his early teens, if he remembered any stand out QSO's.

“It would be the response we got when people heard the WX3 prefix, because at the time that was not a prefix.”

A QSL card that was received was addressed to the young Rick, “Hello Rick, Thanks for pushing 'XMAS' instead of pot! Hi Hi” Yup, 1969, the year of Woodstock.

Bob, W1FBY (now W1XT), was the 1st QSO. He had recently moved to Connecticut from Bethlehem and had been a member of the DLARC the previous year. In fact, as a youngster, Bob received his Boy Scout Radio Merit Badge from Ed Hartman, the original W3OK. All in all, a good fit for the first QSO.

The event was a great success. Just five days after the event had ended the club already had two thousand pieces of mail needing replies. The final tally was almost seven thousand two hundred Q's in all fifty states and in over one hundred countries. Requests did not just come from Hams, a number of requests were sent from short wave listeners.

The loss of time due to the ice prompted the club to run the station a second year. When the call sign had been again obtained a letter was sent out to various venues that read, in part, "The D.L.A.R.C. is pleased to announce that the special call, WX3MAS, will be placed on the air for one *final* period this Christmas season (1970)."

One final time? Well, never say never, right?

The rest is history, so to speak. The event has kept going even though it no longer runs two weeks anymore. Still, when the conditions smile the Q's are still in abundance.

Eventually the vanity call sign system was developed and the club permanently acquired the special event call sign. Later the WX3MAS became an honorary club that all DLARC members joined when they paid their yearly dues. Another honor goes to the most recent past president of the DLARC. He becomes the President of the Christmas City Amateur Radio Club. The honorary president for the anniversary oddly enough will work out to be AI W3CE.

Forty years. Wow. A lot of clubs are not even that old let alone last that long. Ham radio is full of many great traditions and the WX3MAS Christmas City Special Event Station should certainly be included in these conversations.

So after eight different United States Presidential Administrations have come and gone and thousands upon thousands of QSO's, the DLARC gets ready to celebrate the fortieth anniversary of the Christmas City Special Event. Look for WX3MAS on the air December 12th and 13th of 2009. If you have not participated in this Ham tradition in the past, get in on the fun this year.

BASIC MOBILE INSTALLATION

Barry G. Kery/ KU3X

I have listened to hams talking about their mobile installations and how they plug their 100 watt radio's DC power cables into the power outlet in their car, truck or van. This is not a good practice. First of all, most of these power plugs are fused around 10 amps. Even turning your power back on your rig to about 50 watts instead of running full power (100 watts) you are still going to draw 12 amps or more off of the DC power outlet. Another thing is, your adapter for the power outlet (positive connection) is a very poor connection and has a high resistance. Under load you may not even be able to pull 10 amps and maintain your 12 to 13 volts required to power your equipment. Under the full load of 20 amps peak, if you do not blow the fuse, you will have very poor voltage regulation to the radio. This can create all kinds of garbage being transmitted over the bands.

Here are some basic rules you should follow for a mobile installation and this also includes your 50 watts VHF/UHF rig.

Power leads: The power cables MUST go direct to the battery connections on your battery. Both leads (positive and negative) should be fused. If both leads are fused behind the radio, you will only need to fuse the positive lead next to the battery. The negative lead fuse is a protection for the radio if the vehicle losses its ground. YOU MUST fuse the positive lead next to the battery no matter what. I would never run less than #12 paired wires from the battery to the radio. If you are going to fish wires to the cab of the vehicle, why short change yourself, do it right the first time. I now use Anderson Power Plugs on all of my low voltage equipment. This can make it easy to add radios in your vehicle or even test someone else's gear. Wouldn't it be nice if someone lent you their new HF radio to try and all you had to do it plug it in?

Be very careful how you feed your power cables through the firewall. Most of the time you can put a small slice in the rubber boot that goes around your parking brake cable or maybe your speedometer cable where it goes through your firewall and use that as a place to feed your cables through. Don't just drill a hole in the firewall and push the cables through. You must protect them from rubbing against any metal. If you do have to drill a hole, use a grommet to protect the wires or push a small hose through the firewall and then pass the wires through the short length of hose. Try to keep the wires from flopping around under the hood and under the dash. Use wire ties and secure the wires to other wires. You can always find a place to secure the wires under the hood. DO NOT run any wires under floor mats. You can rub through the insulation and you will get a spark before the fuse blows, if it even blows at all. It does not take much to start a fire.

Grounding: Your HF rig MUST be grounded. The ground lead should be only as long as needed. You do not want to run a ground lead from your rig, through the firewall and ground it somewhere under the hood. My Icom IC 706 Mark II G has its RF deck under the seat of my car. My ground lead goes from the RF deck to one of the bolts that holds the seat to the floor of the car. That lead is about 12 inches long. Use braided cable for a ground lead. Acquire some coax cable, RG 213 or RG 8, strip the outer cover off of it and slid off the shielding. Cut yourself about a 2 foot length to start with. This is great for grounding, even in your primary station. Don't make your ground so short that if your rig moves 1 inch it can rip the connections apart. Give it a little extra length but not too much.

Antenna and its mount: Don't even think of using a mag mount for HF. It does not provide a ground. Where your coax connects to your antenna mount, you MUST ground your shield of your coax to your vehicle's body.

DO NOT think just because the shield of your coax is grounded to your rig and your rig is grounded to your vehicle you have a good ground. You do not ! You need a good RF ground. Your mobile antenna system is something like a dipole. Would you put a dipole up in your back yard and only connect the center conductor of your coax to one side of the dipole and not connect the shield to the other leg of a dipole? Your antenna that you just installed on your vehicle is one half of your dipole and your vehicle is the other half. It is somewhat of a balance system. For VHF and UHF, I'd suggest getting a good Diamond or Comet antenna mount. This mount can also be used for an HF antenna. I use one that clips on to the trunk of my car. The one thing you have to do, and many hams don't give it a thought, is make sure the Allen pinch screws get down to the bare metal of the vehicle. Don't be afraid to use some sand paper to remove some of the paint from under your trunk lid.

Nobody is going to see where the paint is scraped off. You can always get some touch up paint and dab it on when you remove the antenna mount. Your vehicle will not rot away because there is a little bit of paint removed.

RF decoupling: Even with grounding the shield close to the antenna mount, you can still have RF follow the outside of the shield of the transmission line back to the radio. Here is where some decoupling can be used. If you can get hold of an Amidon FT 240-61 or FT 240-43 ferrite core, you will have the start of a good RF choke. To cover from 54 to 3.5 MHz, wrap 10 turns of coax through either of the two above mentioned cores as close to the antenna as you can. Or you can use ferrite beads that slide over the coax. This will provide a good RF choke so there will not be any RF coming back on the outside of your coax and creating radiation problems inside of your vehicle. If you are using a screwdriver type antenna and it uses a DC power cable to run the motor inside of the antenna, you must put ferrite on the DC cable before it enters the vehicle. Without ferrite on the power lead you have created a nice path for RF to get into your vehicle's wiring. The computer in my 1989 Dodge van cost \$1000. How would you like to have RF get into it and possibly burn out some of the components? All vehicles today have computers. Are you a gambling person? If you are transmitting on HF and your car seems like it's misfiring and acting funny, this is your first warning that you have RF problems. But that's not to say you will always have a warning before failure.

Transmission line: I found RG 8X to be very good cable to use mobile. It is very flexible and has a low failure rate. RG 58 uses a solid center conductor, although you can get it with a stranded center conductor, but 8X is a little heavier, has a stranded center conductor and is nice to work with. If you use RG 58, you will find that if there is any movement next to any of the connectors, the center conductor will break inside of the PL 259. I've had it happen one time to me and once was too many times. I scrapped all of my RG 58 and replaced it with 8X, even in my primary station for low power runs.

Bonding : Some people like to bond all of the movable car body parts with braided cable. Doors, trunk and the hood of a car can be bonded with the use of shielding from RG 8 coax. This not only makes a tighter RF shield throughout the vehicle, but it can increase the ERP of your antenna system. Remember, your vehicle is the second half of your dipole. The more metal you have on your vehicle, the better the second half of your antenna system is. Just like ground radials under a ground mounted vertical antenna in your back yard. If your doors, hood and trunk do not have a good electrical connection to the main body of your vehicle, that means you have less metal for the second half of your antenna. An HF mobile antenna works better on a full size van without windows than it does on a small compact car. Reason being, there is more metal for the antenna system.

High Power: If you are going to run a KW mobile, this is another ball game. You really need heavy power leads the run from your battery to your amplifier. Two pairs of #8 or #6 wire are in order here. If you put the amplifier in the trunk of your car, you can't have too heavy of a power cable. The more copper you run, the better off you are. Some hams even put an extra battery in the trunk close to the amplifier. If you do install an extra battery in your vehicle, either under the hood or in the trunk, you may have to diode protect the extra battery. If you do not and your main vehicle battery goes dead, when you try to start your vehicle you will be drawing very high current through your amplifier's power cable. Make sure your alternator in your vehicle can handle the high current. If it can not, you will be changing alternators on a regular basis. You may have to bypass all power and control leads for all of your ham gear. This means lots of .01 @1KV caps as well as lots of 100 micro Henry chokes on all power cables. This includes all control cables. Installing an RF amplifier in your vehicle can really be a major job. I just wanted to touch on this area so you know some of what you are in store for.

The above article was not meant to be the bible for mobile installations, it was just meant to give you some important guidelines to follow for a good ham radio mobile installation.

CLUB POLO AND TEE SHIRTS

Louis / KB2VCI and Doreen / KB3PDL will be taking over the ordering of the polo shirts. The Blue Polo Shirts are \$20.00 and the Black Tee Shirts are \$25.00. Contact them to order either or both shirts.

RESTORATION 101

by Paul Schlueter III / KB3LIC

Once you start getting into Ham Radio, the next thing that seems to follow is looking for great deals on radio gear at swap meets and flea markets. Even the internet has its share of bargains, (and money pits!) Sooner or later, you'll probably find something that needs a little restoration when you open the box.

RULE 1: When you first power up any used device, use a Variac. Start at zero volts, and slowly increase the voltage you apply, watching a series ammeter to be sure you don't have any surprise shorts inside the device. Filter capacitors in older gear, (usually electrolytic or paper/wax) are notorious for drying out and shorting the rectifier output, which can burn up an irreplaceable power x-former!

RULE 2: Never trust the last guys work! If you see an obvious mod or fix, double-check it yourself. Ideally, restore everything to factory circuitry, using the original schematic. Check ALL component values on old gear, (anything over 10 years) because they drift out of spec with age. Carbon composition resistors and all caps other than plastic, tantalum, or ceramic are the worst. Restore to design value, (measured) not marked value!

RULE 3: Use caution with chemicals. De-Oxit is great for clean-ups, but it can soak into phenolic boards and cause irreparable partial shorts! Rubbing alcohol is almost always a better choice than water, except on some finished surfaces. Discharge all circuit caps before poking around them with wet Q-tips!

RULE 4: If it looks complicated, photograph it before you take it apart. Make copious notes and drawings. If you aren't certain, ask for help or advice. And, if it "might be questionable," replace it. Always try to repair the device the way it was made.

I've had lots of fun restoring old gear, and there's nothing like the feeling you get when you align an old radio and start tuning in real signals. If you don't have much experience, there's probably someone around the Club who'll be happy to sit with you in a home-brew shop and guide your efforts. Be safe, but have fun; there's no better way to develop your technical skills than to actually work on gear, and many restorations work fine without major troubleshooting problems. You get to learn the tech stuff, without straining your brain to figure out what has gone defective.

Restoration is a great hobby for Dad's and kids, too!

NOVEMBER MEETING PROGRAM



Mel / W3SQ related his experiences supplying communications during the Alaskan Iditarod Dog Sled Race. Stressing that HF communications were impossible during the race due to aura conditions. However he was able to work the lower states on several bands, just not the race route. With assistance from Joel / WB3IWC, who also went to supply communications, spoke of the balmy minus 7 degree highs and the minus 40 lows during their portable operations. Mel then went on to describe the pitfalls of using a vertical with radials in the camp grounds

around the country, and how his homebrew dipoles were used with great success in the various campgrounds. Then moving on to portable operations with a light weight rigs and antennas. Relating how he hiked the Appalachian Trail with a QRP rig and Black Widow Antenna. He brought a Black Widow Antenna along to demonstrate, the size, weight and simplicity of erection. He had it ready to go in a short period of time, which was even longer than an the actual time required, as he explained each step as he went along.



WEBSITE OF THE MONTH

Pete / NL7XM

<http://www.qsl.net/dl9ho/english.html>

PROADIKON is a conversion program for Windows95 / Windows98 / Windows2000 / Windows NT / Windows XP coded in Visual Basic 6.0. It converts Log-Data from different Logging-programs to ADIF-Format. This is very useful to import your contest Q's into your regular logging program, so you can upload to LOTW, eQSL, etc. for awards credits.

NEW AWARD

To safely contain critters on the farm, ranch hands employ stockade barriers made of wood or wire. The DLARC's flagship publication, "The W3OK Corral," contains Club news, but proudly publishes interesting articles from other sources, none more welcome and appreciated than those submitted by our very own Members.

To encourage initiative and reward participation, we announce the "Electric Fence Award." The metaphor this award represents, 'contains' Member contributed articles that appear in our own "W3OK Corral," with a clever component related to our Hobby. Look back now at all the 2009 Newsletters, and choose your favorite article. Then vote (only once) via email to me, at: <W3OPA@dlarc.org> Whoever gets the most votes will win the first annual, "Electric Fence Award" at the Club Christmas / Awards Meeting on December 3rd. You must act quickly! One of our writer's needs your vote!

Charlie / W3OPA
DLARC Awards Chair

GIVE YOUR GENERATOR SOME SPACE

Dan Romanchik / KB6NU

The National Institute of Standards and Technology (NIST), the same folks that bring you WWV, publish a monthly newsletter called NIST Tech Beat. Here's an item from the 10/6/09 issue of NIST Tech Beat that will be of interest to radio amateurs.

To subdue the steaming heat of hurricanes or to thaw out during a blizzard, gasoline-powered, portable generators are a lifeline during weather emergencies when homes are cut off without electricity. But these generators emit poisonous carbon monoxide—a single generator can produce a hundred times more of the colorless, odorless gas than a modern car's exhaust. New research from the National Institute of Standards and Technology (NIST) shows that to prevent potentially dangerous levels of carbon monoxide, users may need to keep generators farther from the house than previously believed—perhaps as much as 25 feet. Up to half of the incidents of non-fatal carbon monoxide (CO) poisoning reported in the 2004 and 2005 hurricane seasons involved generators run within 7 feet of the home, according to the U.S. Centers for Disease Control and Prevention (CDC).

Carbon monoxide can enter a house through a number of airflow paths, such as a door or window left open to accommodate the extension cord that brings power from the generator into the house. While some guidance recommends 10 feet from open windows as a safe operating distance, NIST researcher Steven Emmerich says the "safe" operating distance depends on the house, the weather conditions and the unit. A generator's carbon monoxide output is usually higher than an automobile's, he says, because most generators do not have the sophisticated emission controls that cars do. "People need to be aware that generators are potentially deadly and they need to educate themselves on proper use," Emmerich says. With funding from CDC, NIST researchers are gathering reliable data to support future CDC guidance. NIST building researchers simulated multiple scenarios of a portable generator operating outside of a one-story house, using both a test structure and two different computer models—the NIST-developed CONTAM indoor air quality model and a computational fluid dynamics model. The simulations included factors that could be controlled by humans, such as generator location, exhaust direction and window-opening size, and environmental factors such as wind, temperature and house dimensions. In the simulations the generator was placed at various distances from the house and tested under different weather conditions. "We found that for the house modeled in this study," researcher Leon Wang says, "a generator position 15 feet away from open windows was not far enough to prevent carbon monoxide entry into the house." Winds perpendicular to the open window resulted in more carbon monoxide entry than winds at an angle, and lower wind speeds generally allowed more carbon monoxide in the house. "Slow, stagnant wind seems to be the worst case because it leads to the carbon monoxide lingering by the windows," Wang explains. Researchers determined that placing the generator outside of the airflow recirculation regions near the open windows reduced carbon monoxide entry.

In the next phase of the study NIST will model a two-story house that researchers believe will interact with the wind differently. NIST researchers also have worked with the Consumer Product Safety Commission on related work. (See: "NIST to Study Hazards of Portable Gasoline-Powered Generators," NIST Tech Beat, March 5, 2008.) The generator study can be downloaded at <http://fire.nist.gov/bfrlpubs/build09/PDF/b09009.pdf>. * L. Wang and S.J. Emmerich. Modeling the Effects of Outdoor Gasoline Powered Generator Use on Indoor Carbon Monoxide Exposures. (NIST Technical Note 1637,) 2009.

F.Y.I.

The winners of the November Prizes were Jon / N3INJ and Rich / N3UB.
The EASTERN PENNSYLVANIA District 2 ARES Net meets every Wednesday at 1930 hours local time. (Just after the DLARC Net) On 147.255 (pl 162.2). And linked to 449.375 on Blue Mountain, 443.350 in Allentown and 147.180 in Berks County.

The OK Corral is an organization publication for the purpose of informing members of the D.L.A.R.C. of educational and training opportunities, club events, relevant news articles and a monthly calendar of daily activities, meetings and dates. Every member of the D.L.A.R.C. Is welcome to contribute articles of interest to this newsletter. Opinions, items of interest, and even suggestions towards the improvement of newsletter and/or the DLARC, itself would also be accepted, as a sort of "Letters to the Editor" section.

The Milkhouse now as a Magic Jack Phone with the number 484-895-7038.

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CAN BE FOUND ON THE WEBSITE / MEMBERSHIP LISTING**

CLUB MEETINGS

All regular meetings of the D.L.A.R.C. Are held on the first Thursday of each month at
7:30 PM at the Nancy Run Fire Company
TALK IN ON 146.700 (PL 151.4)

THE W3OK TRUSTEE --- DON REAMER / KA3JWE

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ARES, RACES AND DLARC NET

All Radio Amateurs are welcome to participate in the ARES, RACES and DLARC net. This net meets
Wednesday at 1900 hours local time, on the W3OK Repeater 51.76, 146.70 and 444.90 (pl 151.4).
With an alternate frequency of 145.11 (151.4)

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