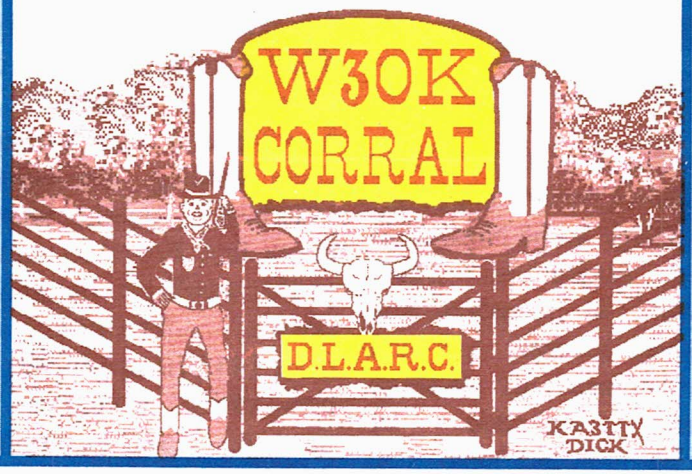
DELAWARE - LEHIGH AMATEUR RADIO CLUB, INC. W3OK

February 4, 1993



SPECIAL SERVICE CLUB

ARRL Affiliated Club

WHAT ARE GRID SQUARES, AND VHF

VHF & GRID SQUARES

450 AND ABOVE

by Bill, K3ANS, Program Chairman

The February speaker will be Bill Murphy W0RSJ. The topic will be Grid Squares and their relationship to VHF and Microwave contesting. About 9 years ago the ARRL changed the VHF contest rules. Before this change ARRL sections were used. In a effort to make the contest fairer for those amateurs not in the North East the league experimented with changes to the contest rules. The final change was to go with Grid Squares. This change allowed the United States VHF community to be in tune with the rest of the world. The contest was not the only thing affected. A series of new awards were instituted by the League to promote VHF and microwave activity. All of these required the working of grids. For those of us who had already worked a State and had the QSL prior to the change we were just out of luck. The contact still counted for WAS but not the grid.

Most VHF amateurs have accepted Grid Squares as the way to go. The world is divided into 32,400 Maidenhead Locator Squares. We are in FN20.

If you want to find out just how many grids can be worked on the VHF and Microwave bands: 50,144,222,432,903,1296,2304,3456,5760 & 10,300 Mhz don't miss this talk.

Bill moved to Easton from Colorado in 1986 he has been active in VHF contesting, see the ROVER story part II. He was first licensed in 1963 as KN3ZSG when he lived in Norristown,PA. He is the current President of the Mt Airy VHF Radio Club the Pack Rats.

DLARC FEATURED ON COVER OF NEW ARRL HANDBOOK

The lastest issue of the ARRL RADIO AMATEUR HANDBOOK shows a picture taken at Field Day, 1990 by N3GWR.

To have one of our clubs activities used on the cover shows the quality of JP's work. The fact that when the tower was being erected, N2LAU was standing on someone's shoulder helped make the picture. Inside the front cover, it credits JP and the DLARC for the photo.

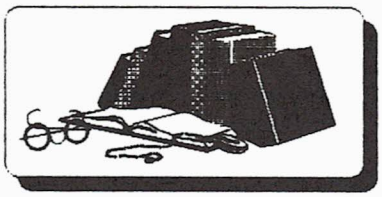
AUTO PATCH CODES TO CHANGE

On February 10th the access code to the autopatch will change. The new codes are on the back of your new membership cards. If you have not paid your dues by February 2nd your AUTODIAL NUMBER will be removed.

JUST THE MINUTES

by John, N3IGA, Secretary

The DLARC meeting was called to order at 7:31 by Robin, WA3T, at the Northampton County Community College in the Northampton Auditorium. There were 86 members and guests present. A motion was made by W3PYF and seconded by N3NNH to approved the December meeting minutes as printed in the newsletter. Dick, KA3MOU, gave the Treasurer's report with an ending balance as of December 31, 1992 of $7590.85.



The DLARC would like to welcome the following new members:

Tracey Nichols, KB3AER;
Alexandra Cook KA3ZSS;
Edward Smith, KB3AIU;
Dawn Schneider, N3IVR,
Barry Vogt, N3NVA.
Mark Wolfe, Richard Shevalier III, Elaine Kita,
Terry Coleman all have calls pending.
John McClary, an SWL, who likes to listen to 70 became an Associate member.



Clarence, W3PYF, presented both Chris, NU3L, and Robin, WA3T with an ARRL Certificate of Merit for the outstanding achievement in the Amateur Radio education program. They really have done a fabulous job with the Novice classes.

Barry, KU3X, talked about the club's different awards that are available to members. The club has two awards which are Worked All States and DX 100 Award. Barry explained that a logbook is required to verify the contacts. Please contact Barry if you have any questions or need any of the forms.

Robin, WA3T, announced that there will be VE testing at Greystone Building on Friday, January 8, and Team #1 will be present.

Bob, KE3AW, informed members on the outcome of the Christmas City Special Event which was a big success. There were 23 operators, who made a total of 506 contacts. John, N3IGA, who is filling out the certificates, announced that there have been over 150 replies so far. Chris, NU3L, announced that there will be a General Class starting on January 11 at the Greystone Building. The Novice-Tech Classes will start on March 8. Anyone interested should call the club's phone line, 820-9110, and leave their name and address so that they'll get the information packet on the Novice classes. The matter of moving the DLARC node from 144.970 to 144.990 was brought up to the members present. A vote was taken, and the results were to move it. It will be brought in front of the Executive Committee, and the outcome will be known at the February meeting.

Bill, K3ANS, informed the members on how the Hamfest is progressing. Committees are being formed. If you are interested in getting on a committee, please contact Bill, K3ANS. February's program will feature Bill Murphy, W0RSJ, who is well known for being one of the top VHF contesters. It will be an interesting program for Technicians because he works the same bands that they can use.

The feature program was Paul Ryan, N0KIA, who presented a great talk on NTS and Packet. He explained the proper format of sending traffic through Packet. It was very interesting to see another use of Packet.

de John, N3IGA

ATTENTION COLLEGE BOUND AMATEURS

Licensed radio amateurs who will be going to college in the Fall of 1993 are invited to apply for the 47 scholarships administered by the Foundation for Amateur Radio, Inc.

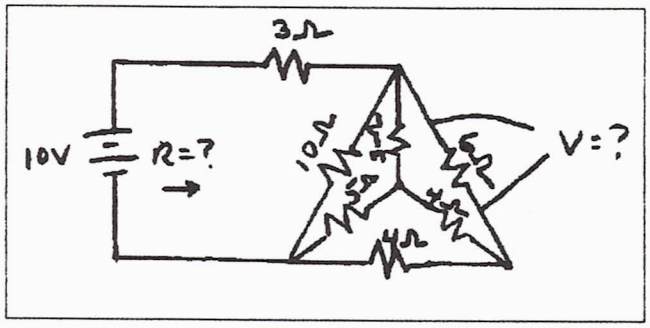
Sponsors include QCWA, the 10-10 International Net, and the Radio Club of America. Several awards, sponsored by clubs, are specifically designated for residents of DELAWARE, FLORIDA, MARYLAND, NEW JERSEY, PENNSYVANIA, VIRGINIA, AND WISCONSIN.

Aplication forms and additional information can be requested by letter or QSL card prior to May 1 from - FAR SCHOLARSHIPS 6903 Rhode Island Avenue, College Park, MD 20740

MORE TO MAKE YOU THINK

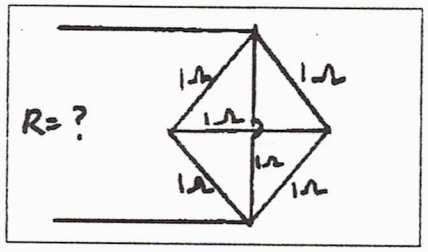
After the cube resistor test supplied by Steve, W3HFT in the December Newsletter and the answers which were reported in the the last issue, Gus W3PTG supplied the following for your interest. If you have an answer, and I have them this time let me know.

THE REAL CHALLENGER



Find the resistance looking into the network and the voltage across the six ohm resistor with 10 volts supplied to the input terminals.

THE EASY ONE



What is the value of R? All resistors are

one ohm..

Let your editor know again, if you have the answers.

Will publish those who have the answers in the next issue, *de Clarence, W3PYF, Editor*

SPECIAL FOR FIELD DAY?

by Ray, W3TDF

ELEPHANT STEW

1 medium Elephant, 2 rabbits (optional) , Brown Gravy (Lots of it).

Cut elephant into bite-sized pieces (this will take about 2 months). Add enough brown gravy to cover. Cook over kerosene fire for about 4 weeks aat 465 deg. This will serve about 1973 people. If more are expected, the rabbits may be added. Do this only if necessary, because most people don't like hare in their soup.

A QUESTION OF PRIORITIES

by Robin, WA3T, President DLARC

The question of whether to upgrade our 440 repeater or the 145.110 repeater (W3PYF), or to upgrade the club station still needs discussion before we can come to a conclusion about the order in which we do these things, and when we should do them.



Apart from those who used the rig for the Christmas City special event, there appears to be just one member who uses the club station. One other person has indicated that he might have used it, if he had felt more familiar with the rig. At the recent club meeting, a couple of people asked questions which indicated interest in using it. The bottom line is that our club station is rarely used. The mystery is, why?

It has been suggested that one of the reasons that the W3OK HF rig goes unused is that our newer members are not even aware that it is available, especially those who have joined the DLARC since we stopped having our monthly meetings at the Greystone Building. This is a good point, and we'll make sure that future new members are told about it when they join.

In the meantime, for the benefit of recent new members, here's the situation in a nutshell...

The club station is available 7 days a week, 24 hours a day. Normally the entrance to the Greystone Building is locked. To get to the radio room, ring the on-duty Northampton County emergency operator, who will check your identity, and let you in. Don't be upset if you have to wait a few minutes to get in: the operator's first priority is handling emergencies!

It is important to remember that as a control operator you may only operate within the terms of your own licence, at this or any other station. We ask that you sign the log, for a number of reasons including making it possible for us to measure the amount of use the station gets.

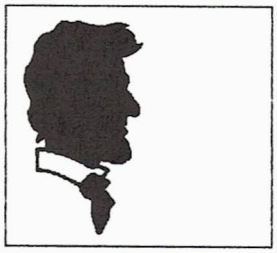
If you want to use the station, but are unfamiliar with the Kenwood 430 and feel uneasy about using it, try to get hooked up with someone who has a 430 or 440, and is willing to demonstrate it in his shack, or to meet you at Gracedale to check you out on the club rig. The placards which Bob, KE3AW is creating should go a long way towards making it easier to operate the 430.

We want to be sure that we spend our money wisely, to the benefit of the maximum number of members. At its next few meetings, your Board will be discussing the various options open to us, and will come up with a recommendation for the consideration of the club. In the meantime, think about what you would like to happen, in terms of the services which you would personally use and benefit from.

Let us know! ***73 de Robin, WA3T***

LINCOLN SAID IT

REPRODUCED FROM THE "BLURB"



You cannot bring about prosperity by discouraging thrift. You cannot strengthen the weak by weakening the strong. You cannot help the wage earner by pulling down the wage payer. You cannot further the brotherhood of man by encouraging class hatred. You cannot help the poor by destroying the rich. You cannot keep out of trouble by spending more than you earn. You cannot build character and courage by taking away man's initiative and independence. You cannot help men permanently by doing for them what they could and should do for themselves.

Abraham Lincoln



DICK KELS K3YU

Dick Kels, K3YU, (James R. Kels) became a silent key on January 6th..

Dick was a career man in the Marine Corps for 20 years, serving in World War II, Korea, and the Vietman Wars, before retiring in 1972 with the rank of Master Sergeant.

Although not a member at the time of his death, he was a former officer of the club, who participated in many of the club activities.

Dick is survived by his mother with whom he lived and by a sister, Patricia K. Smith.

DLARC MEETING TO BE HELD AT THE NORTHAMPTON COUNTY COMMUNITY COLLEGE ON FEBRUARY 4th IN THE NORTHAMPTON THEATRE.

7:30 PM

Talk in on W3OK repeater 146.70

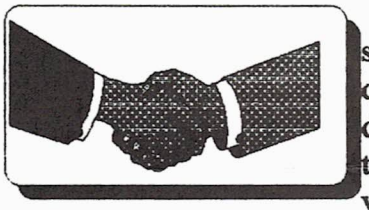
FROM THE OLD GROUCH

by Clarence, W3PYF



KEEP OUR REPEATER FRIENDLY!

I have been trying to do it, and I wish that all of our members would do the same.



When you hear a strange call on the frequency take the time to day hello. Welcome them to the area and do what you can to let them know that we want to help.

Even when you hear one of our own members on the frequency, greet them, and if you are busy, at least leave them know that they are making the repeater. It may not mean much to you at the time but to the traveller, it could mean a lot.

I am sure that many of you have been in strange locations, away from our own repeaters, stood by on a freauency and no one , but no one answers.. But in just a few seconds, someone comes on the frequency calling a friend of his or hers and they immediately reply.

I have had notes from many who have travelled through our area, thanking our members for their kindness.

Change in format.

You will notice that I have changed the format and type faces in the OK Corral.. What are your feelinng? Shall I go back to the old type faces?...let me know.

de Clarence, W3PYF, Editor

SWR..WHAT IS IT?

by Earl, K4FQU

Many Amateur operators today do not fully understand what people are talking about when the her "***VISWAR***" discussed. A quick in the bible, "The Radio Amateur's Handbook" will clear this up easily. Herein is a short synopsis of what Viswar is. It is a term used to describe the state of the standing waves on ones transmission line. In any long line the impedance is the same at any given point because the ratio of voltage to current is always the same.

The impedance at the end of the line is however near zero because the line is short-circuited at the end. When poser is fed up the transmission line, it reverses its direction upon meeting this short circuit and goes back toward the input end. There is now a large current in the short circuit with usually no voltage across the line at this point. This power going out toward the antenna is called "Incident power" and the power coming back towards the transmitter is called "Reflected Power".

The reflected current travels at the same speed at the outward traveling current so its valley will be different at every point along the line at a distance of time represented by one cycle. At some points along the line the phase of the two currents will be such as to cancel each other, while at the other points the power will be doubled. These different amplitudes depend on the time required for them to travel and depend on the time required for them to travel and depend on the distance along the line from the point of reflection.

At the antenna end of the line the (short circuit) both currents will be in phase and the total will be large. A half wavelength back from the antenna the two currents will again be in phase and the current will again be of maximum value. This will apply to any point that is a multiple of a half wave along the line. The two currents will cancel at the one quarter wavelength points along the line. At this point the current will be zero. These current variation along the line are referred to as "standing waves".

The ratio of maximum current to minimum current along the line is called STANDING WAVE RATIO (SWR). It is a measure of the mismatch between the load and the line, and is equal to 1 when the line is perfectly matched. At that point the maximum and minimum are the same since the current and voltage do no vary along the line.

SWR ratio formulas can be found in the handbook and are relatively easy to understand. SWR reading can and do vary greatly depending on a multitude of reasons. Readings from Commercial SWR meters except for a few very good ones, are general and should be taken in that context. For all practical purposes, a low reading, below 2.0 can be considered normal in most instances although 1.0 or flat as we like to call it is better.

This will undoubtedly raise some argument, it is not written as a tutorial, merely hoping to take some of the mystery out of "VISWAR". Study the handbook.

de Earl K4FQU

reprinted from the Fort Meyers Radio Club Modulator

CONTEST CALENDAR

by Barry, KU3X, Contest Editor

Feb 6-7	QCWA CW QSO Party
	YL-ISSB CW QSO Party
Feb 7	North American Sprint, CW
	W1AW Quallifying Run 10-40 WPM
Feb 7-8	1993 Classic Radio Exchange
Feb 8-12	School Club roundup
Feb 13	North American sprint
	Utah Meter challenge
Feb 13-14	New Hampshire QSO Party
	EA RTTY Contest
	YLRL YL-OM CW Contest
	Dutch PACC Contest
Feb 20-21	ARRL DX CWContest
Feb 25	W1AW Qualifying Run 10-35 WPM
Feb 26-28	CQ WW 160 Meter Contest
	REF French contest, SSB
Feb 27-28	RSGB 7 Mhz CW Contest
	YLRL YL-OM SSB Contest

CONTEST TIP #9

Check out the bands at least one week before the contest. How are you really going to know what to expect on the bands during contest if you don't get on before the contest?

de Barry, KU3X

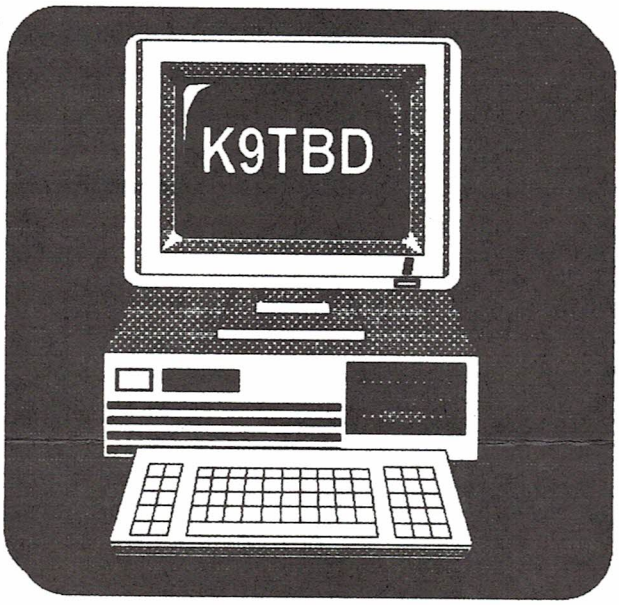
Digital Communications

by Joel, K9TBD, Feb 93

A bit of the past.....

Original text © 1922 by Scientific American Publishing Company, and as it says 'All rights reserved The right of translation into all languages including the Scandinavian, is reserved...

Page 216 is very interesting... here is a bit of it... ***Transmitters That Are Sharply Tuned*** (title of this section). Single-circuit transmitters are not permitted under the present radio laws, for the reason that the waves emitted are not sufficiently sharp.



Too much cannot be said in favor of the radio laws in this direction; anyone who has been listening in to the radiophone service must have experienced the annoyance of some spark station breaking in on the music.It goes on of course - explaining the virtues of the L-C tuned circuit which is connected to the aerial or "open circuit". The inductor serves to charge the condenser which discharges across the spark gap, it continues to describe the 'autotransformer principle used in the aerial linkage.In connecting up the various components of a transmitting set, heavy wire, certainly not less than No. 12, insulated or bare, should be used.....In order to determine the proper number of turns for the closed and the open circuits, the usual method for the amateur is to use a measuring device known as a hot-wire ammeter in the aerial circuit, for the purpose of measuring aerial current. Approximate results may be.

One method largely employed by amateurs in tuning their transmitters is to adjust their oscillating circuit and then the aerial circuit for maximum output, after which they ask a radio friend to listen. Picture entitled: "Panel type damped wave transmitter, such as employed on board steamers."A whole section on the construction of condensers follows with the advice:- Air, moisture, and small vacuum pockets must be eliminated from each section , and... Before the wax has hardened a pressure plate is placed on the top most section

SPARK GAPS OF ALL KINDS:...

The gap must be kept cool, so that the discharge will not arc and to this end the rods are often provided with cooling fins.It is found that a short gap between cool electrodes is quenched very quickly.Attempts to produce a high pitch spark with a 60-cycle source by means of a synchronous gap giving, say, exactly six sparks per half cycle have not given satisfaction, because the applied voltage is not the same at the time of the different sparks, and while the note is of high pitch, it is not musical.This chapter ends up on ... But for the amateur who cannot go to the expense and trouble of a small motor-generator set for generating a 500-cycle current, the rotary gap will be found quite satisfactory on 60-cycle supply.An extract from page 266 is germane today

:On some circuits, "urgent" messages are accepted which take priority over all others, and require the payment of a considerably increased rate. As a general rule, the minimum number of classes of messages required to maintain an acceptable load factor is desirable not only because of the increased routine in handling traffic of many different classes but also because of the confusion in the public mind and the possible dissatisfaction which results when the type of service rendered in any given case is not clearly understood in advance.Shades of yesterday -

This was from a book that my father W9IDI and later K9YYB got from somewhere and probably started him in amateur radio. The book is entitled, ***"Radio for Everybody"*** by Austin C. Lescarboura, 1922.

A CASE OF RFI

by Williard, KA2VEM

I began receiving a buzzing noise on my transceivers, amateur and short-wave radios. After finding that the noise carrier of 8 S units did not go away, I called JCP&L.

A troubleshooter was sent out and I showed him where I thought the RFI was coming from. I used an AM broadcast radio as a direction finder. After two weeks I still had the noise, so I call the power company again.

This time with Terry (KA2UUV) on hand we showed another troubleshooter. It took a third visit on the next day, by Mark Hilliard (N3NBL) an RFI specialist.

Working with Mark, using radio direction finding equipment we narrowed it down to one apartment. After entering the apartment, Mark returned and said the problem was solved. I asked, what was it?

Mark replied, "A BUG LIGHT". My reply was, I WANTED AT "BUD LIGHT".

de Williard, KA3VEM

January, 1993 VE session.

by Robin, WA3T

At the January VE session, six candidates braved the forecast ice storm to take a total of 12 elements.

There were two upgrades, and three new licenses...

Joe Walmach, III, KE3EL upgraded to Extra
Mark L. Lukas, N3MNH upgraded to General
Maynard W. Reeves, III New Technician with HF
Terry L. Coleman New Technician
Richard B. Hollabaugh New Technician

VEs in attendance at this session were John, WX3C; Bill, NC3P; Ed, WU3T and Robin, WA3T. The next session is on February 5th. Team 4 will be in attendance.

73 de Robin, WA3T, Team Liaison Alternate.

Bye-bye Morse operations!!!

by Norm, W2JUP

NAVTEX transmission from US. Coast Guard Radio Miami on 518 KHz.

Effective August 1, 1993, all United States Coast Guard Communication Stations and cutters will discontinue watchkeeping on the distress frequency 500 khz, and will cease all Morse code services in the medium frequency radiotelegraphy band. More efficient telecommunication systems are now available to provide the mariner with options for initiating or relaying distress alerts, and passing and receiving maritime safety information. These options include Inmarsat, radio telex (sitor), mf/hf single sideband and VHF radiotelephone, and satellite epirbs (for distress alerts and telecommunications), and inmarsat safetynet, navtex and hf navtex (sitor) (for maritime safety information broadcasts).

Navtex broadcasts include the same notices to mariners, weather, search and rescue and fixed fishing gear location products that have been provided by the mf Morse broadcasts. Distress and other calls to any U.S. Coast guard communication station can also be made on any of the following hf single sideband radiotelephone channels: 424 (4134 khz) 601 (6200 khz), 816 (8240 khz), or 1205 (12242 khz). Meteorological broadcasts are also made on these channels. We believe these options provide sufficient redundancy to ensure that adequate distress and safety communication capabilities are available. Questions or comments regarding this discontinuance of MF Morse telegraphy services can be sent to any coast guard communications station or direct to U.S. Coast Guard Headquarters:

Commandant (G-TTM)
U.S. Coast Guard
Washington, D.C. 20593
signed ***Capt R. Hammond***
Deputy chief, Office of Command, Control and Communications, U.S. Coast Guard, by direction.

HAM RADIO BECOMING EXPENSIVE IN RUSSIA

by Ed, NT2X

HR IN CIS BECOMING EXPEN$IVE

There are serious troubles looming on the horizon for the amateurs of the former USSR. Obsessed with 'market economy', people in charge of Amateur Radio Service on the government level have imposed (or will impose very soon) substantial fees for the privilege of operating on the air. First class license (equivalent of the US Extra) will cost a ham 120 rubles per annum. To enter any contests one would fork 240 rubles per year, in addition to the above. It won't matter if you run a 100 watts or 10 KW. Special calls call for yet more money. In US currency this doesn't look like much ($1 = 500 rubles), but it sets a dangerous pattern - pay for what once was free, and expect an increase anytime. The opinions of ham ops were never requested, it seems. In addition, getting contest certificate via the bureau would cost 5 rubles, receiving a single card via the bureau now costs 50 kopecks, sending a single card abroad via the bureau would cost 2 rubles 15 kopecks. An airmail letter from Russia to anywhere in the world now costs 75 rubles. Since prevailing majority of hams can't afford to send airmail letters (average salary now stands at 3-4,000 rubles per month) in quantity, and because the foreign mail isn't getting through to Russia, those U-cards will become very rare indeed very soon. Moscow hams report piles upon piles of incoming QSLs at Box 88 that don't and won't get processed. The bureau is broke, can't pay employees and its own mailing expenses.

Again, hold onto your CIS cards, don't mail them over there until the situation is resolved. On the related subject: January 1993 was set as a timeframe for the changeover of current amateur callsign allocations to a new system. 95% of all Ukrainian calls will change and substantial amount of Russian calls, if the new system is implemented. Other republics will see a full 100% change of existing calls. As was announced earlier, the new allocations were assigned without any consultations with hams, thus Amateur community of the former USSR republics is in the state of turmoil. Nobody knows what will take place, when and how. Letters were sent to the ITU, trying to stop the new assignment, government offices responsible for Communications were petitioned without any obvious results.

There is talk about having hams retain present callsign system, while commercial and utility calls would be converted. At this time, it is all pure speculation and no decisions on this explosive topic were rendered. There would be no special calls assigned within the CIS for 1993, I was told, pending the outcome of the above. As always, will provide more details as they become available.

73 de Ed/NT2X

Editors note, Ed is the Ham who spoke to the DLARC on the Russian Coup.

==========

W3OK CHRISTMAS CITY SPECIAL EVENT STATION 1992 A MERRY SUCCESS

by Bob, KE3AW, Chairman

The 1992 Christmas City Special Event Station from the Christmas Cities of Bethlehem and Nazareth was a big success, thanks to the 23 operators of DLARC and their guests who enjoyed a fun time at the station.

During the weekend of December 19 - 20, the station was on the air 24 hours. A total of 506 QSOs were logged with hams in nearly every state in the USA, including Hawaii and Alaska, and in 14 foreign countries. The following persons operated the station:

Chris, KA3YFK (our youngest club member at 10); Joe, WV3M; Dave, N3JGX; Andy, N3NLA; Charley, K3BCV; Ken, N3IYX; Bob, W2CCE; Tom, N3LLL; Chuck, KD3SQ; Jim, WA2ZGO; Bob, N2OTI; Charlie, N3LXF; Rick, N3MHW; John, N3IGA; Bud, WA3BOM; Bob, KA3WJF; Joe, N3MKZ; Bob, N3NEK; Robin, WA3T; Andy, N3NNH; Mike, N3BUB; Beorn, WU3M, and Elaine (awaiting call sign), who is Ed, N3MSK's XYL and "the voice on 75 meters."

Thanks to these Special Event Station operators. All persons who operated at this event have received or will receive a Certificate of Participation. Thanks also to the members (or XYLs ?) who supplied the snacks and goodies during the special event station operation! And finally, thanks to John, N3IGA, our Special Event Guru, who, besides operating and working the station, has the privilege of personalizing all the Christmas City certificates for amateurs who contacted and QSL to DLARC. And to all, a good night.

de Bob, KE3AW

IMA LIDD

Digital Signal Processing -

Part 2

by Van, K3CP

"Hi, Elmer," said Ima Lidd. "It's good to see you again. I am looking forward to continuing our discussion on DSP."

"Hello, Ima," replied Elmer. "Yes, I will go into some detail as to what DSP means to amateurs and how it works. The specific application for this discussion is in an audio circuit. The DSP is inserted between the 'phone or speaker jack of your receiver and the 'phones or speaker."



Ima interrupted. "OK, but does it require power? If so, where does it get it?"

"Good question, Ima. Yes, it does require filtered DC. The power may be supplied from any filtered DC power supply of the proper voltage. "To continue, remember that in order to digitally process an analog signal we must convert it to a digital one. This is done in a circuit called an analog to digital converter. To maintain reasonable fidelity the sample of the analog wave must be at a rate that is at least twice the highest frequency to be digitized. If we are going to digitize a signal from the speaker or headphone jack of a SSB receiver we would use a sampling rate of no less than 2 times 3000 Hz. Over sampling would be desirable but expensive.

"Let's take a QRM problem caused by one or more heterodynes on a SSB signal. The interfering signal is generally one of constant frequency while the desired signal is varying at the speech frequency (300 to 3000 Hz). The DSP filter identifies the QRM (because it's always the same frequency) and after digitizing it, removes it. Briefly this is how it works. Once a signal has been digitized, digits (numbers) are assigned to various spots along the wave form. These numbers will vary randomly in the signal in accordance to the audio frequency. If the heterodyne is a constant, say 800 hertz, the DSP will not transform it back to an analog signal thereby effectively eliminating it.

"Now, if there are two or three interfering signals, this would leave several holes or notches in the processed signal. This would cause distortion that could make the signal unreadable. To prevent this, the Digital Signal Processor will take several readings before each notch and several after and average them and use these averages to fill in the notches."

"I see," said Ima. "Then the filtered signal sounds like the original one, but without the interfering heterodynes."

"That's right," said Elmer. "If you would tune your receiver slightly, the interfering signal would also shift in the pass band and then the DSP would again eliminate it.

"DSP can be used to create a very effective CW filter. For example, suppose we want to copy a CW signal from our receiver and that we want the note to be 750 hertz and to reject any signal within plus or minus 100 Hz. We would program the DSP to reject any signal below 650 Hz. and any signal above 850 Hz. This is very good filtering action. We accomplish similar filtering by using crystal, mechanical or SCAF (switched capacitance audio filter), but none of these methods produce filtering action with as steep slopes as the DSP. Also, ringing becomes a problem with other filter designs. There is no ringing using DSP."

"Ima said, "Wow, that's sounds like a very good heterodyne and CW filter. Can DSP be used for anything else?"

"Yes, it can. It can be used as a noise filter using the same techniques as we just talked about. It can be used on the transmitted signal as well. Imagine being able to shape your voice pattern or CW signal wave form. You could eliminate the low frequencies in your audio to better cut through the pileups or shape your CW note to be as sharp or as soft as you like."

Ima asked. "Is DSP available to the average ham and how much would it cost?"

"Yes," replied Elmer. "It is available on some rigs, or as an add on. It's also available in kit form. The cost is between $100.00 and $600.00.

de Van, K3CP

The ROVER

by Dave, WD5BRP

Part 2..

Experiences in the UHF Contest

We start out Sunday morning from Camelback and head west on I80 then south toward Hazelton to get to FN10. It's a beautiful sunny day for a Sunday drive. We don't have a location picked out yet to operate from, but I know we can find one. Bill says it needs to be on top of a hill where we can look out and see blue sky. We wander on the back roads in search of this ideal spot, taking any road that goes up. As we travel one of Pennsylvania's back roads that's just barely two lanes, I'm sure you all have been on this kind of road, and we see a sign that says 3 ton bridge ahead. Bill asks me the weight of the motor home and I tell him it's licensed at 5 tons, but I think it only weighs around 3 tons, someday I have to weigh it. We reach the bridge and I ask Bill how far down it is? He answers, about 20 feet. It's a wooden bridge and there always stronger than they say, so I tell Bill we will just cross it Quickly! We make it, hope we don't have to go back that way. We're near the top and we can see a microwave tower just off the road a bit. Now to find a spot to pull over. I pulled over at the spot and we looked it over. We have trees on each side of us, but from the top of the motor home, I think the antennas will be above the trees.

Only one little problem, these electric wires are about 6 feet above the roof. We listen on 2M, Bill says this is usually the most active and we should be able to gage how things might work from that. It appears we are in a VHF/UHF dead zone, very very quiet. Well there must be a better spot further down the road.

Not to far along down the road we are headed down hill. We go in search of the next hill top. Murphy remarks that it seems as if Pennsylvania roads are all built in valleys. We find a number of good locations to pull over, all at the bottom of the valley. Can't please these VHFers for nothing. I think the scenery is great, this state has more miles of back roads than any I've been in and it's just like *"On the Road"*, you never know what you will see. We are somewhere south of Hazelton in FN11 now. We check the map and find a place called Eagle Point, that must be a hilltop. We're off to there. It seems as though we are going down hill to get there and now the road is just a little more than one lane, hope we don't meet anyone, I don't like to have to back up this motorhome. Before long we are almost at the bottom and we round the bend and find a building on one side of the road, with a steep bank on the other and I'm not sure we're going to fit through the opening. It's like we're going right through someones' house.

We make it and now we're going up. Road doesn't seem to match my map. We get to what I think is the top, but there's no open country or place to park. Bill says we missed the turn and tells me to take the next right. ute oh, there's that house with the road through it. I'll bet you can guess where we are, yes we have been here before. So far we haven't been doing to well, but we know if we go further south it has got to open up. Off again, these back roads are a great Sunday afternoon drive even if you're not roving. We see a sign for Hawk Mountain, that sounds like what we are looking for, let's go there. We start up the hill and it's going up and up and up, this has got to be the spot we're looking for.

As we reach the top we see hundreds of cars parked along the road, must be some other Rovers, but where is the open area, down the other side. Hawks must like that area because it has a million trees and they can fly above them where the blue sky is. On the road again. We reach a little town and it is setting on a hilltop, we will go just outside of town and find a place to park. As I'm driving out of the town I see a road that heads up, let's go that way. This is looking good, now for a place to park.

We come to an empty church parking lot and pull in there. This looks great to the south, the only little problem is the homes near this church, Bill's not to enthused about the location. I get out and check to see if the church services are over, says 11 AM and it's past 1 PM and no more services today. Bill doesn't think we should try here, we could cause TVI with the nearby homes and someone might not appreciate us in this parking lot. This is the second church we have found atop a hill. We're off again in search of that elusive hilltop. Bill tells me they make few contacts from FN10 and FN11, I think we know why. This country side is really great if you like Sunday drives and small towns and farm country. I have been doing this for years. We see a father pulling his little boy in a wagon, we pass him a couple times, Bill says I think that kid is older than the last time we saw him. Are we going in circles again? Well let's go off to the east for awhile, there must be a hill over that way.

We drive a couple more hours. I think we are running low on time, but we sure have seen a lot of Pennsylvania today. We also know where not to go in January, I'm not sure Bill is impressed. We decide to head for home. Contacts today, well I talked with W0RSJ and he talked with WD5BRP, but we didn't need the radio. I had fun on this second day of Rovering too and I think Bill did also.

de Dave, WD5BRP

SO YOU THINK YOU HAVE ANTENNA PROBLEMS!

by Kathryn Griffin Swegart

When GUGLIEMO MARCONI arrived on Cape Cod in 1901 to construct an experimental station, his wireless telegraphy had transmitted across the English Channel and assisted in dramatic sea rescues. But he had yet to prove that it could carry radio signals across the Atlantic.

Cape Coders were suspicious of his fame and his fancy ideas. They eyed critically and refused to sell him land. Marconi, after much persuasion, finally got local salvager to part with eight acres and hired locals to build 20 towers, using ship masts. Skeptical neighbors crowed the construction site, shaking their heads and stating, "It'll blow down in the first northeaster." On November 25, 1901, a storm blew off the ocean and knocked Marconi's tower down. He rebuilt, this time using timbers buried deeply in the sand and buttressed my planks and steel cables.

It did not go any easier for Marconi throughout 1902. Even Thomas Edison said what he attempted was impossible. As the year drew to a close, Marconi worked feverishly, ignoring his neighbors. He hired a local man, Charlie Paine to wait outside with his horse. The second that Marconi achieved success, Paine could rush the news to the Wellsfleet telegraph operator and the world beyond.

January 18, 1903, was bitter cold, Paine threw an extra blanket on Diamon, the horse, and huddled in his Alaskan wolf coat, waiting. Above him leaping blue sparks made jagged arcs across the sky.

Then out of the station burst Marconi, with both hands full of white telegraph tape -- greetings exchanged by President Theodore Roosevelt and England's King Edward. He had jumped the radio wave 6,000 miles to England and back! Marconi shouted, "Drive like the wind! If your horse falls dead I'll buy another !".

But Charlie Paine wasn't about to let some agitated outsider tell him what to do. " I started off for Wellsfleet as fast as I make the horse go while Marconi could see me, " he said, " but I got over the dunes, out of sight, and I slowed down. I wasn't going to kill my horse for nobody."

Eventually, Charlie Paine got the message to the telegraph operator at Wellsfleet. Marconi celebrated with a late-night dinner of goose with gravy. And though his success on Cape Cod paved the way for modern radio broadcasting, it was one of his Cape Cod neighbors who had the last work - or at lest controlled how fast the word got out.....

From: YANKEE, January 1992.

JUST DESERTS

from World Radio January 1993

Have you watched a speeding car and asked yourself "Where are the police?" . Consider this item from *Westlink Report* for 26 October. The FCC has slapped a Manchester Township, New Jersey man with a $3,500 fine for his use of a too-powerful Citizens Band radio that they contend wreaked havoc with his neighbors' television and radio reception. As part of a recent nationwide crackdown by the FCC against airwave violators, the fine was levied against Joseph Wirth and may be the largest ever issued by the agency in the Jersey shoe area, according to FCC spokeswoman Gertude Anderson.

GOLD PLATED CABLES?

From the ARRL Letter

The ARRL Letter, 28 October, reports that a Lancaster, PA womas has received two years probation, has been fined $100.00 and has been ordered to pay restitution for damage to the station of a neighboring amateur, according to the *Lancaster Intelligencer Journal.*

The woman was found to have dut two cables connected to her neighbor's equipment. the amateur , who was not identified, claimed damatge to his transmitter of $1,1971.49.



All Amateur Radio Operators are invited to Participate to 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 Wednesdays at 7:00PM

DLARC INFORMATION LINE 820-9110

The W3OK CORRAL is published monthly and is the Official Publication of the Delaware-Lehigh Amateur Radio Club Inc.

1992-1993 CLUB OFFICERS

President - Robin Mosley	WA3T	820-0944
Vice-President - Bob Green	K3EAW	432-8286
Secretary - John Holmes	N3IGA	837-7487
Treasurer - Dick Dech	KA3MOU	837-1585

EXECUTIVE COMMITTEE

Clarence Snyder	W3PYF	252-2109
Ray Bilger	W3TDF	346-7313
Bill Goodman	K3ANS	258-5063
Bob Kratz	KU3K	866-5879
Chris Hornaman	NU3L	965-4151
Norm Daniel	N3GXW	262-8415

NEWS STAFF

Editor - Clarence Snyder,	W3PYF	252-2109
Technical Editor.- Wm Van Horn	K3CP	691-5979
Digital Editor - Joel Elston	K9TBD	252-1515
Contest Editor - Barry Kery	KU3X	691-8888
Circulation - Dick Peischl	KC3CR	759-0294
Mailing List - Clarence Snyder	W3PYF	252-2109
Printer- Norm Zoltack	K3NZ	799-4044

CLUB MEETINGS

All regular meetings of the D.L.A.R.C. are held on the first Thursday of each month at 7:30 PM at Northampton County Community College
TALK IN ON 146.70

Any comments or articles contributed to this newsletter should be addressed to Clarence Snyder, W3PYF, Editor..717 Porter Street, Easton, PA 18042

The W3OK CORRAL

RR 4 Greystone Building
Nazareth, Pennsylvania 18064-9211

DATED MATERIAL - PLEASE DO NOT DELAY

MEMBERSHIP EXP 12/31/93
ROBERT A. GREEN KE3AW
346 CREST DRIVE
WHITEHALL PA 18052-7204

BULK RATE
U.S. Postage Paid
LEHIGH VALLEY, PA
PERMIT No. 138