Delaware - Lehigh Amateur Radio Club, Inc.

W3OK Corral NEWSLETTER

August 1999

Become an Elmer

The Elmer 101 Project

by Len, N2BSC

In January of 97 a group of QRP (low power) enthusiasts started a discussion on their internet reflector (QRP-l@lehigh.edu) regarding the need for a course that would enable kit builders to understand what exactly was going on in their rig. A group of volunteer instructors were assembled and a popular 40 meter CW kit was identified for use in the project. The idea was to have participants buy the kit and build it step by step according to the kit's well-documented instructions. Volunteer instructors each became responsible for a section of the kit and wrote a "lesson" that explained what each component in each section did, and how it worked. The course reviewed the radio's schematic piece by piece and the lessons were posted on web pages for the students to follow. If you had a problem with your circuit, you could e-mail one of the instructors for help. The project was so successful that the Journal of the Northern California QRP Club dedicated its Fall 98 edition to the Project by publishing the entire set of lessons.

Both the Elmer Project and its associated kit are still available. The question is, can the membership of an organization like our Delaware-Lehigh Amateur Radio Club, take advantage of this resource and add to it through the expertise of our club's membership? If interested please bring your questions, comments and ideas with you to the **August 5th** meeting in **Kiva Hall.**.

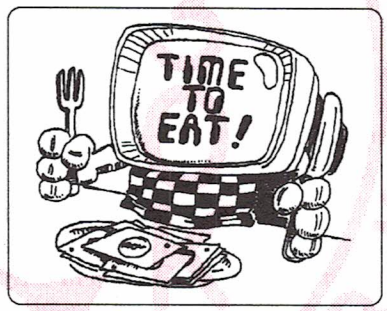
I will be happy to fill you in on details of the Elmer Project and discuss the possibilities of developing our own series of programs on basic building and troubleshooting. We want to know what you would like to know. Whether its soldering, measuring capacitors, or understanding how a power supply works, tell us what you're interested in. This is a brainstorming session only, so bring your ideas.

de Len, N2BSC

Club Picnic Sunday August 15th

by Josh, N3VJA

Hey, y'all! Mark your calendars down now for **August 15th**. Why? Because it's the Annual Delaware Lehigh Amatuer Radio Club Picnic! We'll be at **Hackett's Park in Easton** (as usual) and kickoff time is **12 noon.** Bring kids, games, favorite side dish, yourself (duh!) and the want of a good time (I hear that the quoits competition this year is going to be a good one!). See you there!



de Josh, N3VJA

Easton Heritage Day

by Clarence W3PYF

I want to thank all who came out to help in the lost child patrol for Easton Heritage Day on July 11th. Although we did have one lost child which was taken care of, the city group did not show up on site and it made it very difficult.. His mother was found

Just the Minutes

by Dan, W3ZF

The July 1999 meeting of the Delaware-Lehigh Amateur Radio Club was held on the Thursday, the 1st, in Kiva Hall at the Northampton County Community College and was called to order by President **Joe Chuk (W3JD)** at 1931 hrs EST.



Our first order of business was a sincere "thank you" delivered by Chistina Franzel for the MS Society for a job well done by members of W3OK in support of the MS-150 bicycle tour between Morgantown and Kutztown. This is an annual TWO DAY event that requires the largest numbers of radio operators of any activity we support. It's a rewarding experience and all of your needs (food, drink and lodging) are taken care of during the time of this major fund-raising event.

The paths taken through the Pennsylvania Amish farm communities are breathtaking. It's a time when you can literally "smell the roses" (and cow manure) while enjoying this facet of our hobby. Since the newsletter had not yet been delivered to the membership of the club, there was no motions to accept them.

Our treasurer, Dick, KA3MOU, was absent, so Vice President **Don**, **KA3JWE** gave the Treasurer's report Balance 31May1999 $4,586.50 Total Income $96.65 Total Expense $346.55 Balance 30Jun1999 $4,336.60. A motion to accept the Treasurer's report made by K3MP and 2nd by KE3AW also carried. Our total membership is currently 317.



Our Field Day Chairperson, **Jim N3DFF,** gave a brief report on the W3OK Field Day. The smaller but enthusiastic crowd was able to amass approximately 4,500 points. Jim surmised that about 15 operators took part in garnering these points. Good food and good times were had by all who participated. W3OK did receive some exposure in The Morning Call as there were reports of at least 3 different versions of a story in various regional editions of the paper concerning our event. At least two of the articles featured an "action" picture.

Barry, N3NVA, Chairman of the Repeater Committee reported that the ".511" repeater which had been down for a couple of weeks was finally back on the air.

KE3AW mentioned that our next club's classes will begin again on Sept. 13 and will be a 10 week series. It was also confirmed that our VE test session WILL BE HELD tomorrow (July 2, 1999) in spite of the holiday weekend.

Joe announced 3 upcoming events for which volunteers are needed: 1) Easton Heritage Day, 2) Lehigh River Relay Run, and 3) Derriere in the Delaware. Joe also soberly reminded those in attendance that we need to continue to volunteer for these events. As we all know, it behooves all of us to volunteer our services to these organizations; it's part of what we (should) do and helps us politically when challenges to our frequency allocations arise.

Al, WO4H, then presented us with some background information on two new applicants to our club - neither of which could attend tonight's meeting. A waiver to the attendance requirement was granted to two applicants: **James (Jim) A. Mullins KN3DZY (ex KB3DNB).** Jim works the 3:30pm-11:30pm shift permanently and cannot attend meetings. **Thomas (Tom) Mory KB3DEB** had already attended two meetings. Due to caretaking responsibilities of his terminally ill grandmother and relocation, he is unlikely to make a meeting in the foreseeable future.

A waiver of the "must be present" rule was requested and granted by the Board of Directors. Al's motion to accept these two new applicants was seconded by **KA3JWE**. The motion passed. Welcome Don and Tom!

There are two towers being offered to anyone who wants them. Information on one of them can be obtained by calling (610) 868-3773. Bill, K3ANS knows of another one and should be contacted for more info. Motion to conclude the evening's business was made by **WO4H**, 2nd by **N3XRL.**

This night's presentation was made by Barry, **KU3X** on antennas. Very VERY interesting! Thanks Barry. (Sob Story) The time between the drawing of the raffle and the beginning of the 2nd half presentation is always hectic.

The drawing of the winning number and the awarding of the "take" almost eluded me, but in my haste, I managed to scribble the results on the back of my own losing stub. Well, that stub never made it out of my shirt pocket. When I asked my wife if she saw a red ticket stub laying around anywhere, she mentioned that she thought she saw it in the lint filter of our clothes dryer - which she cleaned out and threw in the garbage. While rummaging through the lint balls, I managed to find a severely mangled washed (and dried) stub. It was in two pieces. I did my best piece it together and inspect what little faded ink was left. I concluded that someone named Bill (NC3P, I think) picked up $20.00!! There were 38 members and 3 visitors (Jay, WA4OWW - Bob, KB3DTR - and Wendy, a wife of a club member) in attendance..

de Dan, W3ZF, Secretary

Hop up your Hustler

by Barry, KU3X

With the SWR protection circuits of today's solid state mobile radios, bandwidth seems to be a major problem when trying to stay below 1.5 to 1 SWR.

If you are using the Hustler resonators on 15 and 20 meters, you have two choices. Readjust the resonator whip or use a tuner. Here is a third and better choice. You will have to obtain, if you don't already have, one or two 75 meter low power Hustler resonators. Remove the shrink tubing covering the coil form and all of the enamel wire. Be careful not to break the solder tabs on the coil form used to attach the enamel wire.

15 meters: Space wind 20 turns of 14 gauge enamel wire on the form. You can use bare wire if enamel wire is not available. Resolder the wire to the solder tabs. Replace the shrink tubing with new tubing (1.5 "x 9.5 "). If shrink tubing is not available, you can use electrical tape, but shrink tubing makes a much nicer job. Now set the whip length to extend 26". This should get you close to the center of the 15 meter band. Check the SWR and readjust the whip if necessary.

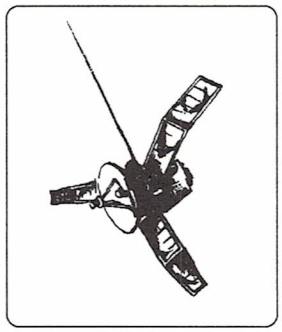
I was able to set the resonant frequency for the center of the band and maintain a very low SWR curve across the entire band. Not only will you be able to cover the entire 15 meter band (450 Khz) without the use of a tuner or readjusting the whip, but you will also have a much more efficient antenna system.

20 meters: Again remove the shrink tubing and all of the enamel wire from the form. Rewind this form with 37 turns of 14 gage enamel or bare wire. Replace shrink tubing and extend the whip to a length of 27" Again check the SWR and adjust whip for a resonant frequency near the center of the band. You should be able to cover most of the band with a very low SWR. Efficiency of the antenna system will again be improved.

de Barry, KU3X

Phase 3d preparations in high gear

Preparations to launch the Phase 3D Amateur Radio satellite are moving full steam ahead, even though a definite launch opportunity remains in limbo. "We are pressing forward to be prepared for a launch in October," says AMSAT Phase 3D Laboratory and Integration Manager Lou McFadin, W5DID.



An announcement at the Dayton Hamvention from Phase 3D Project Director Karl Meinzer, DJ4ZC, raised the possibility of a launch as early as October. At this point, McFadin says, no contract has been signed and negotiations continue. AMSAT has declined to name the launch agency or vehicle, and AMSAT-NA officials have cautioned that the October date is very tentative and just the opening of a launch window.

McFadin says it's a busy time at the P3D Integration Laboratory in Orlando, where a team of experts and the builders of the various Phase 3D transponders--including Meinzer--has arrived from Europe to participate in the P3D rollout. The satellite has been transported outside for an "on air" test in full flight configuration, McFadin said. "The spacecraft is protected from the Florida environment by a big sealed tent."

McFadin says that after "an exciting few days of testing," all RF subsystems aboard the spacecraft were declared in good working order. The Phase 3D team also successfully tested thrusters and fuel tanks.

"The next milestones are the spin balance test and vibration test, before the spacecraft will be transported to the launch site," McFadin said. Vibration testing has had to wait until the team got the final static and dynamic load specifications from the launch agency, he said. Vibration testing will mean a return trip to Goddard Space Flight Center in early July.

"Even if we don't get a launch in October we plan to ship to the launch site in August," McFadin said. "P3D may wait for the first launch opportunity on a hot standby basis--all ready to go on a few weeks' notice."

The ARRL Letter

Don't forget the picnic this year to be held at Hacketts Park in Easton on August 15th...

Multiple call sign holders could face fines

The FCC's Riley Hollingsworth, K4ZDH, says the Commission may have to resort to fines to curb the practice of hoarding multiple club station call signs. "The reason we're concerned about this is that we consider it an abuse of our licensing processes," said Hollingsworth, an FCC legal adviser for enforcement. "If somebody applies for 30 or 40 licenses over time, it really overloads the staff." Hollingsworth pointed out that the call signs often must be typed in manually.

"If we have continued abuse, we're going to have to levy some forfeitures, which we have done in the past for abuse of Commission processes," he said. "With short staff and budget considerations, we just can't let things like this go on."

Earlier this month, a ham listed as the trustee for more than three dozen club station call signs agreed to give up all but one of them. Motoaki Uotome, JA1GZV, who also holds a US Extra ticket as W9BO, apparently was the trustee of 41 club station call signs. Last month, the FCC set aside 14 recently granted club station call signs and 12 recently granted club vanity call signs Uotome held and asked him to justify the grants.

Hollingsworth concedes that the FCC rules do not specify an upper limit to the number of call signs an individual may hold, but says "the underpinning of the rules is common sense." He recommended that multiple call sign holders seriously consider turning in their excess grants before they hear from the FCC, "because we will be pursuing them."

In addition to the Uotome case, the FCC has contacted amateurs in California and Arizona who hold several club station call signs and has asked them to justify having them. News of the cases already has had an impact. "We're had several others come in on a voluntary basis and turn their excess number in," Hollingsworth said.

The FCC says the two-year rule applies for those seeking to obtain one of the desirable call signs being yielded or called back by the FCC, and Hollingsworth plans to specify a date of cancellation on each letter to a holder so that it will be clear when the two years are up.

"We're also going let them know they can't reclaim any of these call signs under former call sign holder exceptions to the two-year period," he said. Close relatives also would be unable to claim any of the call signs in the future. ***via ARRL Bulletin 39***



No question pool changes--yet!

The Amateur Radio examination question pools remain in a holding pattern pending an announcement from the FCC on license restructuring. No question pools or questions will change anytime soon for any license class.

Last September, the National Conference of Volunteer Examiner Coordinators' Question Pool Committee announced that all question pool updates were being put on hold until after the FCC had acted on Amateur Radio restructuring (officially known as the Part 97 Biennial Review). Until the September NCVEC QPC announcement, the Advanced class question pool had been scheduled to expire at midnight on June 30, 1999.

Current examination questions and study materials remain valid until further notice. The NCVEC recently announced that it was postponing its annual meeting and won't set a new meeting date until the FCC drops the other shoe on Amateur Radio restructuring. NCVEC members were to meet July 9 in Gettysburg, Pennsylvania. The FCC's action is expected to have a substantial impact on the content of amateur examinations

The ARRL Letter

FCC sets new vanity fee

via ARRL Letter

The fee to apply for an Amateur Radio vanity call sign will increase from $13 to $14 starting September 10, 1999.

The FCC has released its FY 1999 fee schedule which rounded down the proposed $1.42 per year fee.

The FCC continues to receive in excess of 1000 vanity applications per month. During May, the FCC got 1165 vanity applications, all but 141 of them filed electronically.

* Vanity update: The FCC in Gettysburg reports it has processed vanity call sign applications received through May 28. On June 10, the FCC issued 92 grants. Another 88 applications landed in the work-in-process (WIPs) stack.--***FCC***

Call in on the DLARC-ARES-RACES nets on Sunday and Wednesdays.. We need to keep in touch.

Hurricane

The Greatest Storm on Earth

by Charlie, WA3RSQ

There is nothing like them in the atmosphere. They are not the largest storm systems in our atmosphere, nor are the most violent; but they combine those qualities as no other phenomenon does, as if they were designed to be engines of death and destruction.

In our hemisphere they are called hurricanes, a term which echoes colonial Spanish and Caribbean Indian words for evil spirits and big winds.

The storms are products of the tropical oceans and atmosphere, powered by heat from the sea, steered by the easterly trades and temperate westerlies , and their own fierce energy.

Hurricanes have a single benefit--they are a major source of rain for those continental areas which fall beneath their tracks. Perhaps there are hidden benefits as well, but the main consequence of the hurricane is tragedy.

The hurricane is a large circular storm of awful violence. Winds in the storm reach at least 74 mph or greater, and may gust as high as 200 mph. On average, the great spiral clouds cover and area several hundred miles in diameter. The spirals are heavy cloud bands from which torrential rains fall. Tornado activity me be generated in these spiral cloud bands.

Hurricanes may move quite erratically. They can suddenly change direction, make loops, slow up or stop--and later move at 10 to 20 mph. Some hurricanes along the Mid-Atlantic and New England coasts move at more than 30 mph.

The hurricane's eye is unique as no other atmosphere phenomenon has a center almost free of clouds, with very light winds and warm temperatures. The average eye diameter is about 10 miles. Diameters of 50 to 100 miles are not unusual.

The destruction caused by these giant storms is legend. The death is caused by wind. flood produced rains, and the most lethal of all, the storm surge.

The worst natural disaster in the history of the United States cane as a result of a hurricane which struck Galveston, Texas in 1900.

The storm hit the Texas coast on September 8, caused more than 6,000 deaths. Weather warnings were ineffectual. The people of Galveston unprepared for a storm of such intensity , were helpless in the face of the hurricane.

Hurricane season in the Atlantic is June 1 through November 30th. In the Pacific, it is May 15 through November 30th. The reason it is earlier in the Pacific is the Pacific Ocean is larger and warmer then the Atlantic Ocean.

de Charlie, WA3RSQ

Next Month...More about hurricanes..

VE test session July 2

A test session was held on July 2, with the following results: A total of 3 elements were administered to 3 candidates. Two elements were passed.

Name	License Earned
Charles A. Lazarchak (KB3DEA)	**Technician +**
Kelli F. Webb	**Technician**

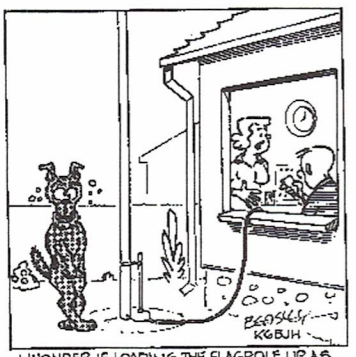
VEs in attendance were **Bill, K3ANS; Dan, W3ZF; and Joe, W3JD**

Our club test session coordinator and public relations representative is Stephanie Clark, KB3DNA.

We need additional Extra Class VEs to serve in this important club service activity. If you're an Extra with or without a VE badge, but would like to help, please call Stephanie at 610-266-0176. Becoming certified as a VE is an easy, and Stephanie will be glad to let you know the process to follow.

With the schedule as it is current designed, the time commitment is just two test sessions a year -- if we get enough VEs on the club team. It's a rewarding experience to see candidates pass the tests to become licensed or to qualify for a higher class. Please consider helping our VE effort.

de Joe, W3JD



I WONDER IF LOADING THE FLAGPOLE UP AS AN ANTENNA WILL BOTHER SPOT

A different kind of Field Day

by Blair, K3YD

My friend (and former DLARC member) Ted, W3TB, invited me to operate FD-1999 aboard his 27' Sloop, the 'Honah Lee'. He suggested operating anchored in Rhode Island waters about 1/2 mile off Watch Hill, RI, in Napatree Inlet. This site is about 20 miles from his home at Groton, CT.

Operating in a marine environment has several advantages. The "swimming pool" is only 4 steps away, and the RF environment is soooo quiet! We could easily copy many stations which didn't move the S-meter; there simply wasn't ANY background noise on 20, 15 or 10 unless somebody came past our boat with an (electrically) noise outboard motor. Besides, the ocean breeze and bay water kept us cool while most of the east coast enjoyed 95 degree+ weather.

We used a Butternut vertical (26' high) mounted on the stern rail of the sloop as our only antenna. Unfortunately the antenna had high SWR from interaction with nearby steel mast support cables and a 33' aluminum mast. Because this was Ted's and my first effort at marine mobile Field Day operation we haven't perfected shipboard RF grounding--yet. We finally got the antenna playing on 5 bands using a combination of an antenna tuner, a single tuned radial, and untuned radials dropped into the salt water. We wondered, but couldn't confirm, if we had some degree of directionality--particularly on 40 meters--due to the 33' mast only about 12' forward of the antenna.

We powered the entire contest with a single 12 V. marine battery with solar panel for daylight charging. Neither of us had enough batteries to operate a laptop computer for 24 hours and the current drain of a computer through a 12V. inverter was more than the marine battery could sustain, so we used ancient operating techniques--a K1 CMOS memory keyer (running on an internal 9 V battery), paper logs and my 20-year old Ten-Tec Argosy transceiver running a great big 5 watts output!

For those of you not familiar with the Argosy, it operates on 80-10 (its only WARC band was 30) CW or SSB, with either 50 or 5 watts output (switchable). For a small QRP radio, I've always liked its receiver with cascaded 8-pole crystal filters, great active audio filters, plus a really effective audio notch filter. From an energy conservation standpoint, it offered low current drain--about 350 mA. in receive, and 1.1 A in key down transmit. Most modern 12 V. radios, when operated in QRP (5 W. out), still draw 7 to 10 A. on transmit, and 2 A. or more in receive. That kind of current drain can very quickly deplete a marine battery.

We chose to focus our operation on CW because QRP CW contacts are worth 10 points each, while QRP phone contacts are only worth 5 points. We had a microphone but decided that we'd plug it in only if: 1. We had worked everybody we heard on CW, or 2. if Ted's 20-year old daughter, Heather N3VVF, joined our operation for a few hours. (A young YL voice is a 10 dB multiplier.)

Even using CW, the QRP power and somewhat crippled antenna made for hard work on both ends of many QSO. We couldn't "run stations" on any band. Only 1 station answered our many CQ's and we worked only 1 tail-ender.

So, it was 24 hours of hunt-and-pounce. Some stations were worked on the 1st call, others on the 10th, far-too-many never! We seemed to have our best signal into the upper mid-west and we did best at a medium speed--about 25-28 wpm.

Thanks to all the 8's, 9's and 0's. Double thanks to the ops who made the effort to dig our signal out of the noise--after multiple repeats. (We worked W3OK on 80 meters on Saturday evening--our guess was that K3OO was the operator on the other end. Whoever it was worked with us, though several repeats, till our qso was in the W3OK log.)

One of the reasons Ted chose to operate from RI was its relative rarity. But, as we operated we found that we had MANY requests to repeat our section. After all, a W3 should be in EPA, or WPA, or MDC or DE, right? Even when we identified as W3TB/1, the RI section threw people a curve ball. The 1C category (mobile capable of operating while in motion) threw a few folks, too.

Our decision to operate with paper logs (and no dupe sheets) resulted in about 9% dupes when we ran the log through CT on Monday morning. (Does anybody know of a logging program for a Palm Pilot or the WindowsCE operating system?)

How did we do? After removing the dupes, we compared our final score with the 1998 FD results in December QST, Our score would have placed us second in the 1C category among those scores. The specific band numbers are shown below.

SCORE: 336 Q's x 2pts (CW) x 5pts QRP = 3,360

Did we have fun? You bet we did! To me, one of the fun things about Field Day is operating from different places. I've operated with about a dozen different clubs or groups over the years, from RI to MO to VA to OK. I've always had fun, and have always learned something, too. So, next June, why not try something different--a new location, or QRP power, or just welcome a visiting ham to the **W3OK Field Day operation.**

de Blair,K3YD

A mobile home manufacturer says it is looking for a buyer. The National Weather Service is interested, with an eye towards using the inventory as **"tornado detectors."** -- ***Jim Rosenberg via the Hudson Loop***

Novice-Tech Classes Start September 13!

by Bob, KE3AW

The Fall session of entry level amateur radio license classes will begin on **Monday, September 13, 1999.** As in past series, these **free** Delaware-Lehihgh Amateur Radio Club sponsored classes will run**10 Monday evesnings 7 pm - 9 pm, and will be held at Gracedale.**



Anyone interested in preparing for the FCC amateur radio license tests, or licensed operators who wants to improve their radio theory knowledge, or aim for consistent 5 wpm code, are invited to join us.

Please pass the word at work, at the dinner table, parties, wherever your discussions typically involve people who might be interested in amateur radio.

Interested persons should contact me for further details, including specific directions to the class location at Gracedale. E-mail me at **ke3aw@juno.com** or telephone me at **(610) 432-8286.**

de Bob,KE3AW

Hams request new bill targeting illegal CBers

Legislation to permit local authorities to crack down on illegally amplified CB transmitters is poised for reintroduction in the 106th Congress. According to an early draft of the bill being worked on by Rep Vernon Ehlers of Michigan, the new legislation would permit state or local governments to pass and enforce laws prohibiting unauthorized Citizen Band radio equipment. Direct enforcement of telecommunication matters is usually considered a federal responsibility, and state and local authorities ordinarily don't step in except in particularly serious cases such as interference with aircraft or police and fire communication.

As outlined in Part 95 of Title 47 of the Federal Regulations, illegal equipment would include CB gear that isn't type accepted, that has been internally modified, that exceeds transmitter power output limits, or that is equipped with an external power amplifier.

Ehlers says that he became interested in the issue when a group of amateurs in his district complained to him about CB enthusiasts using transmitters equipped with high-power linear amplifiers. The illegally amplified CB radio signals were interfering with legitimate ham radio gear, as well as with televisions, telephones and other consumer electronics. Ehlers' district is in the Grand Rapids area.

The bill is patterned after S. 608 introduced last session of Congress by Wisconsin Sen Russell Feingold and substantially modified at the ARRL's request to protect law- abiding Amateur Radio operators. The Feingold bill had been introduced at the request of municipal authorities in Beloit, Wisconsin, who had been unable to stop illegal CBers driving Beloit residents crazy with RFI. Ehlers also introduced similar legislation last session.

The new Ehlers bill contains provisions specifying that possession of an FCC license in any service--including the Amateur Service--would preclude action by the state or local government. ARRL originally requested that section be added to the Feingold bill so that hams would not be inadvertently targeted by local authorities lacking the technical expertise to differentiate between amateur and CB gear. ARRL also requested that the bill require the FCC to provide technical guidance to states and municipalities and that it outlines an appeals mechanism for individuals affected by such laws. The ARRL changes were included in a draft of the Ehlers legislation League officials reviewed.--Steve Mansfield, N1MZA

The ARRL Letter

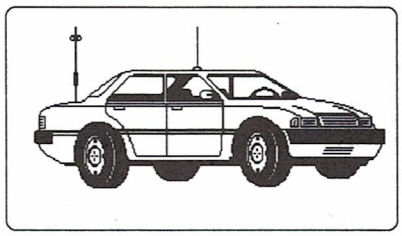


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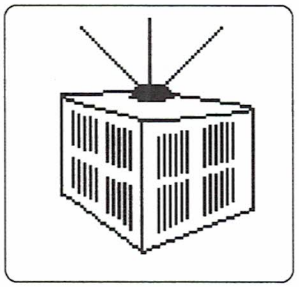
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The ARRL Letter

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Next Sarex mission to test DSP Software

The next Space Amateur Radio EXperiment mission--set to launch in July--will field test a digital signal processing box NASA is looking at to improve the quality of shuttle communications audio.

Word from NASA is that the next SAREX mission has been scheduled to launch on July 20 at 0436 UTC aboard shuttle Columbia mission STS-93. Originally set for last summer, the mission already has been delayed several times.

The STS-93 Mission Commander is Eileen Collins, KD5EDS. This shuttle mission, which will deploy the $1.5 billion Chandra X-ray observatory into orbit, marks the first for a female commander. "It's good to have a challenge like that because it just motivates you and makes you want to work harder," Collins told the Associated Press this week. Other hams on board include Mission Specialists Michel Tognini, KD5EJZ, and Catherine Coleman, KC5ZTH.

Students at five schools--in Texas, Rhode Island, Virginia, and Florida--are on the list to talk to the STS-93 crew via Amateur Radio. And that's where the DSP experiment comes into play. NASA's SAREX Principal Investigator Matt Bordelon, KC5BTL, says the agency's contractors have been exploring ways to make improvements to the aging shuttle fleet. Among the possibilities was improving the intelligibility of shuttle communications audio by using DSP.

But Bordelon says making and testing these kinds of changes on the astronauts' communication system gets expensive and involved, so it was decided to first try out a DSP box by Quintronix on the less-critical SAREX payload aboard STS-93 to see how it performed under actual spaceflight conditions.

"They wanted an easy way to determine if this would clean up the audio," Bordelon explained. The SAREX Amateur Radio gear uses standard interfaces, so it was an easy match from a hardware standpoint. Bordelon says he thinks SAREX will provide a good test of the DSP hardware/software package.

"It's a box with a headset connection on one end and the connectors to the equipment on the other," he explained. "It's got a couple of switches on it, and it's battery-powered," so it doesn't need to take power from the shuttle itself.

Bordelon says the two-channel DSP box tailors both the transmit and receive audio, but it is not adjustable. The only thing the operator can do is turn the box on or off and either enable or disable it.

"For anything in spaceflight, you want to keep it as simple as possible," he said.

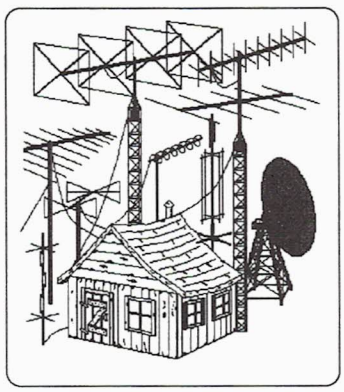
The Quintronix DSP box will interface with one of the old reliable Motorola MX-360 H-Ts that NASA has been using for SAREX flights for nearly two decades now--the same type of transceiver that astronaut Owen Garriott, W5LFL, used to make the first Amateur Radio contacts from space in 1983.

NASA has dubbed this particular SAREX hardware configuration as "Configuration CQ." Bordelon explains that SAREX is comprised of several different configurations of hardware, each one designated by a letter of the alphabet. "We typically use Configuration C on most shuttle missions," he said. Add the Quintronix DSP box to the mix, Bordelon says and "you could either say that we merged the two together for a purely coincidental name or, that it embodies the true spirit of Amateur Radio for this mission."

STS-93 will mark the 25th time that the Space Amateur Radio EXperiment has flown. It's also the only SAREX flight scheduled for 1999 and the last one scheduled to take place from the shuttle fleet. Bordelon says future shuttle missions will be "way too busy" to accommodate SAREX. The Amateur Radio on the International Space Station program is working toward establishing a permanent Amateur Radio presence in space aboard the ISS. An interim Amateur Radio station should be operational from the ISS by early next year.

The SAREX program is a cooperative venture of NASA, AMSAT, and the ARRL. For more information on SAREX, contact Jean Wolfgang, WB3IOS, e-mail jwolfgang@arrl.org..

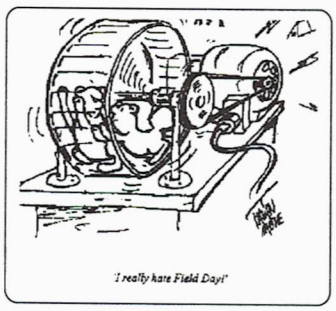
The ARRL Letter



1999 Field Day Report

by Jim , N3DFF

Field Day was again held at the Plainfield Farmers Fairgrounds on Route 191, north of Nazareth. Attendance this year was a bit less than last year. Everyone there had a good time enjoying the outdoors and operating. The weather was quite hot, but no storms.



We operated again this year as a 3A site with stations on 80/15, 40, 20, and 6 meters. We also had a Novice\Tech station. We primarily used wire antennas, with the exception of the 6 meter station where a beam was used. We did use a vertical for the 20 meter station during the daytime for Saturday, but switched over to a dipole in the early evening. Unfortunately, the stations were not operated continuously for the entire 24 hour period.

This year we were visited by Susan Ruiz Patton from The Morning Call. She wrote about the Field Day effort in the June 28th edition of the newspaper. We appreciated this amount of coverage by the paper.

The station managers this year were: Novice/Tech, Sara, **KB3CLQ** and Josh, **N3JVA**; 6 meters, John, **WX3C**; 80/15 meters, Jim, **WN3DZY**; 40 meters, George, **N3SQD**, and 20 meters, Jim, **N3DFF.**

Thanks to everyone who helped, operated, and dropped by. Special thanks go to Glenn, **N3ULW** and Ken, **N3IYX** for the use of their generators; Sharon, **N3RZQ** and Don, **KA3JWE** for the excellent meals. Thanks to the 08:00 AM setup crew at Gracedale, especially Charles, **KB3DEA** for the use of his truck.

The results this year a total of 3,580 points, this is down from last year's total of 4,864..

de Jim , N3DFF

For Sale

Mosley Antenna, Model TA-53-M, 5 Band Beam 10,12,15,17,20 meter coverage. In use 3 years, still on tilt over tower in use, was $600.00 new asking $325.00 or best offer..

To see it in use or buy contact **AA30U, Ed @610 866-7430 (10:00AM-10:00PM) or at internet (aa3ou@fast.net)**

Delaware-Lehigh Amateur Radio Club Inc.

Income & Loss Statement Balance **$4,586.50**

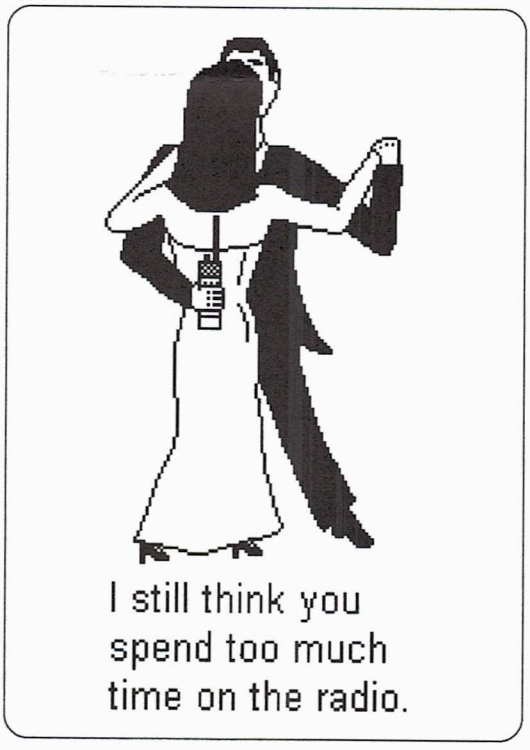
INCOME		
Auction DLARC	25.00	
Dues & Arrl	39.65	
VE Test Session	32.00	

TOTAL INCOME		**96.65**
EXPENSES		
Newsletters for July	100.00	
Postage	183.53	
Telephone	63.02	

TOTAL EXPENSES	**346.55**	
TOTAL INCOME - EXPENSES		**-249.90**
Balance 6/30/99		**$4,336.60**

Total Membership 319 as of 7/1/99

de Dick, KA3MOU, Treasurer



DLARC Hamfest coming up soon. Make sure you have your calendars marked for September 18th.

The Prez Sez

It's All in the Antenna

by Joe Chuk, W3JD, President

Probably the best thing that can be said about the power coming out of our transmitters is that it's all in the antenna -- rather than the feedline, the ground, nearby aluminum siding, or even an antenna tuner. That's just one of the points made by our speaker for the July **Delaware-Lehigh Amateur Radio Club** meeting. More on that in a bit.



Our first order of business for the meeting was to welcome guest **Kristina Fransel**, one of the organizers of the **MS-150 Bike Tour** that took place during the weekend of **June 12 and 13.** Since **DLARC** members played an important role in providing communications for this event, Kristina visited us to thank the club in the name of the MS Society and to present a plaque recognizing our participation. She noted that this year's event was the safest ever, with no ambulance transports necessary. Although that meant we had less traffic on the repeaters than we could have had, that, of course, was a good thing.

Among the usual committee reports was the announcement by Bob, KE3AW, that the club-sponsored Novice / Technician license classes will resume on Monday, September 13, for ten weeks. This is one of the most important services of our club, and I thank the members who regularly teach and assist with these classes. If you find yourself free on any of those Monday nights, stop by Gracedale to introduce yourself to those who are making the effort to become hams.

We welcomed two new members during the meeting. Because both have schedule conflicts that keep them from attending meetings on a regular basis (although both have been to meetings in the past, and one devoted significant effort to the club Field Day operation), the Board had passed a waiver to the attendance requirement and they were voted into the club in their absence. Welcome to **Tom Mory, KB3DEB**, and **Jim Mullin, KN3DZY.**

As is usually the case during DLARC meetings at this time of the year, there were announcements of several public service events taking place in the following weeks. I'm gratified that a good number of the club members present not only put up with my gentle scolding about volunteering for activities like these that really help define who we are as a club but also took the step of signing up to help with one or more of the events. So, to them I say thanks for both listening and responding!

Thanks also to **Jim, N3DFF**, and his Field Day crew for a well-organized and enjoyable event. You'll find details elsewhere in this newsletter. We could have used more operators, but I know Jim has some ideas about how to change that for next year. Thanks to all who operated the stations and/or helped in any way.

For our program, **Barry, KU3X**, gave us the story on antennas from soup to nuts, as it were. I'm sure that many of the newer members heard much that they didn't know about antennas, feedlines, tuners, you name it -- but I also don't doubt that the more experienced hams at the meeting picked up a few pointers, as well. I've heard Barry present on the topic before, but I learn something new each time. It was an interesting program on a fundamentally important topic.

For our August meeting, **Len, N2BSC**, will be talking about a construction project that has been used throughout the country to teach radio construction and trouble-shooting techniques. His purpose for the presentation will be both to let us know what is involved with the project and to see how many members would like to pursue it as a club activity. So, if you're interested either in getting some hands-on experience with building radios or in helping to provide such experience by sharing your knowledge, be sure to come to the club meeting on **Thursday, August 5, in Kiva Hall** at Northampton Community College. We hear a lot of talk about the fact that some hams are just "appliance operators." Here's a chance to learn about what goes into those appliances and what makes them work!

de Joe, W3JD.

All Amateur Radio Operators are invited to
Participate to the DLARC, RACES & ARES nets
on 146.70 W3OK/RPT with an alternate of W3PYF/RPT 145.11
W3OK trustee Chris Hornaman, NU3L
The Nets are held on Sundays at 9:30 AM and Wednesdays at 7:00PM

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==1998-1999==

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CLUB MEETINGS

All regular meetings of the D.L.A.R.C. are held on the first Thursday of each month
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 *(w3pyf @aol.com}* or Clarence Snyder, W3PYF Editor.
717 Porter Street, Easton, PA 18042-1548

visit our web page

http://www.kutztown.edu/faculty/chuk/dlarc/

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