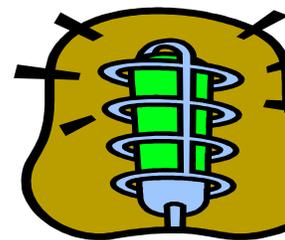




THE LED

Published by The Livingston Amateur Radio Klub
Howell, Michigan



SEPTEMBER 2004

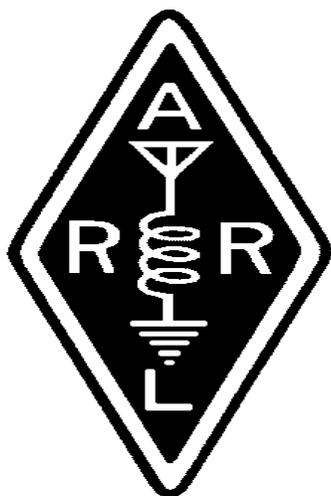
Livingston Amateur
Radio Klub
PO Box 283
Howell, Michigan
48844

www.qsl.net/milark

NET 146.680
SUNDAY 9PM

CLUB CALL IS: KB8ZTV

NEXT KLUB MEETING
September 9th 7:30PM at the EOC,
Highlander Road, Howell, MI



BOARD MEMBERS

President	Art	KC8WAZ
Vice-President	Bruce	N8GVD
Secretary	Mary	KC8SER
Treasurer	Clairus	KC8QQN
Program Director	Bob	K8VQC
Program Director	Jim	WB8AZP
Tech Coordinator	Jim	WB8AZP
Tech Coordinator	Jon	KC8VAB
Board Member	Chuck	W8CLK

COMMITTEE CHAIRPERSON'S

146.680 Repeater	Jack	KA8BOG
LED Editor	Jim	WB8AZP
VE Coordinator	Greg	AA5GO
PIO Officer	Brandon	KC8YHE
PIO Officer	Jim	N8ENX

SOCIAL EVENTS

11 Sep 2004 Grand Rapids ARA, Michigan ARA, & Lowell ARC
<http://www.w8dc.org/swap.htm> Contact: Jack Amelar, NY8D PO
Box 3282 Grand Rapids, MI 49501-3282 Phone: 616-897-6885
Email: grahamfest04@w8dc.org

12 Sep 2004 Findlay Radio Club
<http://www.findlayradioclub.org> Contact: Bill Kelsey, N8ET
3521 Spring Lake Drive Findlay, OH 45840 Phone: 419-423-
5643 Email: kanga@bright.net

19 Sep 2004 Adrian ARC <http://www.w8tqe.com> Contact: Eric
Smith, K8JVW 5398 Hunt Road Adrian, MI 49221 Phone: 517-
263-5407 Email: k8jvw@arrl.net

26 Sep 2004 Hamfest Association of Cleveland
<http://www.hac.org> Contact: William Beckman, N8LXY
4360 Metropolitan Drive Cleveland, OH 44135 Phone: 800-
CLE-FEST or 216-999-7388

PREZ SAYS



THE PREZ SEZ:

I had the distinct pleasure of joining many of you at the Labor Day Weekend Operation Care Event. My, was that fun! Thanks to all those who helped on this wonderful public service event.

Your Board of Directors as had another productive meeting this month and has been privileged with the blessing of the addition of a new committee! We are pleased to announce the appointment of Brandon Field (KC8YHE) as Public Relations Director, and his assistant Jim Busard (N8ENX), and wish to thank them both for voluntarily assuming this very important function for our KLUB ! I'm confident we will all want to give them our complete support and cooperation as we all strive to make the Klub grow and better serve the community! Thanks Brandon and Jim, for stepping up to the Plate, so to speak !

We now have an improved repeater operation, and we look forward to the plans that the technical committee have mapped out to help us improve even more. Check it out at the next LARK meeting!

I hope to see you all at our upcoming September 9th meeting. In the mean time "BE WELL" and Please remember our Troops with Prayer !

73..... Art

LARK SOCIAL NOTES

LARK Dinner Before The Meeting (DBTM).

No Information Submitted by anyone before the newsletter went to print.



Secretary's Report
General Meeting
August 12th, 2004

Our meeting was held at the Park (picnic) in Howell. There were 25 people present, along with K9DOG. It was windy and cool but everyone seemed to enjoy themselves. Good food and fellowship!

Submitted by:

Mary KC8SER

SECRETARY'S REPORT
LARK Board Meeting August 2004
Board Minutes

Meeting called to order by Art KC8WAZ

Clairus, KC8QQN moved to accept the Secretaries report. Van, N8GVD seconded. Motion passed.

Jim, WB8AZP moved to accept the Treasurers report. Van, N8GVD seconded, motion passed.

A letter signed by all LARK board members was sent to Lara and Kenny (N4KCD) at SBC thanking them for their prompt attention to resolving the transmitter issues at the repeater site.

No audit of finances as of yet.

Jim WB8AZP gave the board a report on the 68 repeater and the EOC radio room.

A motion was made by Chuck, W8CLK to replace the repeater antenna at a cost not to exceed \$1000.00. The motion was seconded by Bob, K8VQC. Motion passed.

Bob K8VQC and Jim WB8AZP recapped their presentation to the summer read group at the Hartland library. Although they had a very good turnout, it was reported that none of the libraries had good amateur radio reference material.

Jim, WB8AZP made a motion to buy 2 copies of "Now You're Talking", and present them to each of the libraries in the county. Chuck, W8CLK seconded. Motion passed.

Art, KC8WAZ appointed Brandon KC8YHE and Jim N8ENX as Public Information Officers.

Hamburger was a suggested addition to the menu at the "Picnic in the Park"

Van, N8GVD has agreed to plan and coordinate Field Day for next year. The event will be held at Tom KB8AL's place on Stelzer Road.

Silent Key. Work is continuing on this project.

Clairus, KC8QQN made motion to adjourn. Jim, WB8AZP second it. Motion passed.

Submitted By,

Mary KC8SER

TREASURER REPORT

TREASURER REPORT GENERAL OPERATING FUND

FOR PERIOD August1, 2004 TO August 31, 2004

OPENING CASH (CHECKING ONLY)	\$ 538.38
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INCOME

EXPENDITURES

JIM WB8AZP, PRINTING LED	79.28
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ENDING BALANCE.	\$ 409.50
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OPENING CASH (CD \$1,000.)	\$1,221.59
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OPENING CASH (CD \$500.)	592.13
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TOTAL OPERATING CASH. \$2,223.22

EMERGENCY COMMUNICATIONS
FUND TREASURER REPORT.

PERIOD August 1, 2004 TO JUNE 30, 2004

OPENING CASH (CHECKING ONLY)	\$1399.31
Now Your Talking Books	- \$ 211.50
BALANCE August 31, 2004	\$ 1187.81
BALANCE FOR THE SUNSHINE COMM	\$86.44

Respectfully submitted,
Clairus KC8QQN
Treasurer

WANTED!!!!

I need as many peanut butter containers as possible, something like 50 of them would be great. I would like them to be with lids and of the 16oz size. I have a wide assortment of nuts, bolts, washers and such that is in need of a new home instead of in the bottom of the draws of my tool boxes. Thanks in advance for your help.

Clairus KC8QQN

STILL LOOKING

I'm still looking for additional pictures to be included in the Klub photo album. If there are any photos of Sub Drew at our outings, I would like copies. Additionally, any Klub pictures of any LARK activities would be appreciated. Please bring them to a LARK meeting or send them to me!

Mary, KC8SER

EDITORS COMMENTS



This month has been busier than I could ever have imagined. The LED is not arriving to you all in a timely manner, and for that I apologize. However, before anyone begins to complain, understand that your growling will fall on deaf ears if you are not willing to pitch in and help, or if you still refuse by some sick sort of twisted perversion to support the LARK organization, both physically and monetarily.

Amateur Radio needs your support, and part of that support comes by way of supporting local radio clubs, like LARK. If you have a differing opinion, I'd love to hear from you.

Articles

We still need YOUR articles for the newsletter. Swap items, favorite stories, magical operating moments, remembering your favorite rig, the time your dog ate your logbook, whatever. Need a suggestion for a good article? Just call! Need help writing it down? We can assist you. In case the lack of heat and humidity has left you a little confused, you can reach me at:

Jim Kvochick WB8AZP
10366 Greystone Court
Brighton, MI 48114-7650

810-220-2098 Voice

810-220-2126 Fax
330-283-7070 Cellular

WB8AZP@ARRL.NET

50/50 Plus Drawings

If you haven't attended a recent regular meeting, then you've missed out on fabulous prizes that are given away along with splitting the raffle pot. Ask a member who has attended for the low down. Better yet, why not show up at the next regular meeting?

SUNDAY EVENING NET ON 146.68

Let's not forget about the Sunday evening LARK net on 146.68 at 9PM. It's a great time to connect with other LARK members, share information, and just in general gather on the repeater. You would think that a club the size of ours could muster up more than a handful of checkins, now wouldn't you? Why not even volunteer to take on the Net Control responsibility for one or two Sundays to gain some experience? Don't need experience in running a net? How about just volunteering to help out?

SILENT KEYS ON LARK WEB PAGE

We still have a Silent Key section on the LARK webpage. Feel free to send me additions to this section. If you have special requests, please contact the LED Editor. Please note, the membership requested this change, the LARK webmaster made this change, and the membership has responded by doing virtually nothing. I'm pretty confused by this one.

TECHNICAL COMMITTEE

The technical committee will get underway officially in September. I hope we can get together for a few minutes after the regular meeting in to chat for a bit. I'm grateful for all of those folks who have volunteered to serve the Klub in this fashion.

REPEATER ISSUES

With the help of many folks, we have the existing equipment at the 146.68 repeater running as well as it can. That's great, but not good enough, if we are going to continue to support our community in providing emergency communications services. We need to strongly consider upgrading the existing repeater hardware, and prepare for additions to improve our performance within Livingston County.

In a separate article in this newsletter, the LARK technical team has detailed a 3 year plan to improve repeater performance, and add equipment to promote effective use of handheld transceivers throughout the entire county.

The Livingston County management team assisted us in the past by providing funding for purchasing equipment. Homeland Security policies and procedure changes make this very difficult to do this at this time, which means our group, and concerned supporters will bear the cost of the planned upgrades. LARK needs your support, both in the physical and fiscal sense, more than ever before.

We are blessed with much technical talent within the LARK, but we still need to plan for the next 20 years of repeater operation. As we look to fund our planned upgrades, I ask those that can to contribute generously to our cause.

See you at the next meeting, right? (Even if you're not a member now, you can become one!)

Jim WB8AZP

ARPSC

RACES Qualifications

The FEMA IS-2 Emergency Preparedness U.S.A. is now back on the FEMA-EMI website. This course is one of the requirements for RACES. Please download the material and then take the test. I have some hard copies available.

Incident Command System

Incident Command System is the standard by which Fire, Police, and EMS conduct business. In order to be of assistance in doing your job with providing emergency communication in a critical incident, you must really understand what is going on, and who is really in charge of the incident. The FEMA IS-195 Incident Command System Course is also on the FEMA-EMI website. Please download the material and then take the test if you have not already

Please don't wait for the real thing and wished that you would have taken the time to attend some training.

TOWER AND AMATEUR EQUIPMENT FOR SALE

Al Corr W8IW is selling his amateur radio gear and tower. Please contact his daughter, Barbara Chick 810-229-4675 for information.

HOBBY DAY AT CROMAINE LIBRARY

The LARK has been invited to participate in "hobby day" at the Cromaine Library on Saturday, October 16th, from 10AM until 2PM. Brandon, KC8YHE, will be commenting more about this at the next meeting. If you just can't make it to a meeting, find Brandon on the air. Amateur Radio needs your support, and this event, just like Operation Care, helps present Amateur Radio to the community.

FCC STILL ENFORCING PART 15 RULES IN SOME AMATEUR INTERFERENCE CASES

While the ARRL has accused the FCC of sweeping under the rug several Amateur Radio complaints of interference from unlicensed broadband over power line (BPL) devices, the Commission apparently is not ignoring other Part 15-related interference complaints from hams. With the assistance of the ARRL Laboratory, the FCC continues to dog complaints--some now longstanding--of power-line noise interference to amateur communication.

Other cases of Part 15 device interference to radio amateurs have been a bit more exotic. For example, two recent citations issued by the Portland, Oregon, FCC field office involved interference from wireless microphones operating in the 70-cm band. "The agent measured the field strength at 1500 uV/meter at a distance of 3 meters from the referenced wireless microphones and determined that the microphones were in noncompliance with §15.209 of the Commission's rules, which apply to intentional radiators," the FCC said.

Daniel Bathurst, WA7ABU, of Salem, Oregon, filed the complaint. In citations to FLECO Corp of Chino, California, and The Club Works Sound and Lighting of Salem, the Commission alleged that the devices, which operate on 432.55 and 439.55 MHz, also were not certificated for sale in the US. The FCC citation indicated that FLECO had sold the microphones to The Club Works.

As reported, the FCC earlier this year fined Best Wok, a Westville, New Jersey, restaurant \$10,000 for operating transmitting equipment on the 2 meter satellite subband without a license. The eatery allegedly was using a so-called "long-range cordless telephone" to communicate with its delivery vehicle.

Other recent cases have stemmed from radio amateurs' complaints about their neighbors' Part 15 devices. In a Texas case that FCC Special Counsel for Enforcement Riley Hollingsworth described as "an unfortunate neighborhood situation," the neighbor allegedly not only failed to respond to FCC letters but tossed out the toroid core devices the amateur, William Cooper, W5ZAF, had provided free and which, the FCC said, had resolved the interference.

Hollingsworth told the neighbor that under Part 15, operation of a consumer product "such as a battery charger" must not result in harmful interference to a licensed radio service. He emphasized that it's the neighbor's responsibility to correct the interference--whether or not the neighbor accepts Cooper's help.

In a similar case in Colorado, Hollingsworth on August 10 wrote another amateur's neighbor about interference from an electric fence charger to the Amateur Radio and broadcast television reception of P. E. Muetz,

KOAWS. "Operation of a consumer device such as your fence charger under Part 15 of the Commission's rules must not result in harmful interference to a licensed radio service, and Part 15 of our rules clearly explains that," said Hollingsworth, who'd also spoken with the neighbor by telephone last April.

In a seeming turnabout-is-fair-play situation, the FCC contacted a Mattawan, Michigan, resident to follow up on complaints that the individual's TV set was causing harmful interference to the Amateur Radio operations of Robert Lawson, KG8QD. Sharon Bowers, deputy chief of the FCC's Consumer Inquiries and Complaint Division, noted that Part 15 obliges the TV set's owner to resolve the interference promptly. Under Part 15, a TV set or a computer monitor is considered an "unintentional radiator."

In July, the FCC contacted Illinois Power Company to report receiving complaints that the utility's equipment may be causing harmful interference to the amateur operations of Earl Shaffer, WB9UWA, of Normal. "The complainant has attempted unsuccessfully to work through your usual complaint resolution process, and, as a result, the matter has been referred to our office," Bowers said in a form letter to the utility's CEO. In both cases she handled, Bowers provided the address, telephone number and e-mail address of the ARRL's Radio Frequency Interference Desk as a source of "help and guidance about radio interference that involves Amateur Radio operators." More than five dozen power line interference cases have been referred to the League this year.

LIFE IN SPACE FUN, CHALLENGING, ASTRONAUT TELLS PENNSYLVANIA STUDENTS

NASA International Space Station Science Officer Mike Fincke, KE5AIT, told students at Pennsylvania's Upper St Clair High School August 27 that life in space is both fun and, at times, challenging. The Amateur Radio on the International Space Station (ARISS) school group contact between NA1SS in space and WB4GCS in Western Pennsylvania represented a homecoming of sorts for Fincke, who was born in Pittsburgh and whose

parents live in Emsworth, where he grew up. Fincke said problems with an onboard gyroscope system that occurred just as the Expedition 9 crew arrived aboard the ISS presented the most unexpected challenge to date of his six-month tour of duty. "Our biggest challenge was to get some spacesuits and get outside and fix it, and it turned out that the American spacesuits were broken, and we had to go to our backup plan with the Russian spacesuits," Fincke recounted. "That took a lot of work. That was a big challenge, but we were successful on the Fourth of July weekend, and we fixed that gyroscope's power source." The challenge aside, Fincke said, the experience was "really exhilarating."

Although he's missed his wife and children while in space since April, Fincke says he's enjoying his time aboard the ISS.

"The most fun I've ever had in space has been every day since I got here," he said in reply to a youngster's question. "I've been waiting my whole life, and every day aboard the space station has been a great day. There's always something new, something new to learn, something new to see."

Fincke said he'd like to see the human space flight program focus on once again landing on the moon, journeying to Mars and eventually to the stars. "We need to explore who we are and our potential as human beings."

Fincke also philosophized in response to a question about the perspective he's gained from living in space. "Every piece of history, everything we've ever talked about, every poem that was ever created, every heart that was broken, every joy that was felt is just on that ball of rock that's below us right now, and that really puts things into perspective."

The Expedition 9 crew is scheduled to return to Earth in about six weeks. Mentoring the ARISS contact was Howard Ziserman, WA3GOV. Jim Sanford, WB4GCS, served as the control operator. Setting up the Earth station for the contact were the Wireless Association of South Hills (WASH) and Washington Amateur Communications (WACOM), with assistance from local AMSAT members.

ARISS is an educational outreach with US participation by ARRL, AMSAT and NASA.

NEW "BIG PROJECT" ACTIVITY BOARD A TREASURE TROVE OF TEACHING POSSIBILITIES

The ARRL Education and Technology Program (ETP--also known as "The Big Project") will offer a new activity board to schools this fall. ETP Coordinator Mark Spencer, WA8SME, says the "L/C/Resonance" or L/C/R activity board will allow students to explore many facets of alternating current and RF theory. The board will help students to unravel the mysteries of capacitive and inductive reactance, verify reactance formulas using actual data taken from the activity board, measure the resonant frequency of either series or parallel L/C circuits and then put it all together to explore the relationship between capacitive and inductive reactance and resonance. And there's more, Spencer points out.

"Because the board uses a microcontroller and a digital-to-analog converter (DAC) to generate the ac waveform used to explore L/C circuits, there is an additional learning opportunity: digital signal processing (DSP) fundamentals," he notes. "This facet of the board leads to exploration of root mean square (rms) voltage and current and the mathematical derivation of rms."

Given the level of mathematics involved, Spencer says the activity board is intended primarily for high school physics or second-year algebra students. But, he adds, anyone studying for the General or Amateur Extra license examination could benefit from the learning opportunities the L/C/R activity board affords.

"In other words," Spencer says, "there is a whole lot of activity packed into this little board."

Students use mathematical, graphing, graphing calculator, spreadsheet and critical-thinking skills to make sense of the data collected during the various board activities. For example, students use graphing calculator curve-fitting techniques to verify the reactance formulas. Drawing on the premise that one picture is worth a thousand words, Spencer says, spreadsheet software helps students visualize the raw voltage and current data measurements.

During the DSP activities, students use the OptaScope digital oscilloscope to see the stair-step waveform generated by the computer and the DAC on one channel, and the smoothed waveform exiting a simple filter on the other. "Visualizing a waveform in discrete slices helps students understand what happens during DSP," Spencer explains.

The L/C/R activity board kit includes the circuit board, the parts to populate it, plus documentation to support the board's construction and use. As with previous activity boards, this one is designed to be constructed by students under adult supervision.

Activity board kits are available to interested and qualified schools through generous donations to the Education and Technology Program Fund. To qualify for one of these kits, interested schools need to write Spencer on school letterhead and verify that (1) the lead teacher has reviewed the

curriculum that supports the L/C/R activity board, (2) the curriculum and the board fit into the school's curriculum and the school intends to use the board as an instructional activity, and (3) the school has the capability to build the activity board (preferably, students will do the actual construction).

For schools wishing to roll their own, all documentation, diagrams, a parts list, and software in hard copy are available simply for the asking. Send requests to Mark Spencer, WA8SME, ARRL, 225 Main St, Newington, CT 06111.

Another new activity board kit, to be available in January 2005, is a simple and inexpensive direct-conversion receiver kit, produced by the American QRP Club.

For more information about these boards and the ARRL Education and Technology Program, contact Mark Spencer, WA8SME, 860-594-0396; mspencer@arrl.org. To learn more about how to support the ARRL Education and Technology Program, contact ARRL Chief Development Officer Mary Hobart, K1MMH, 860-594-0397; mhobart@arrl.org.

ARISS PUTS ISS PHASE 2 EQUIPMENT TO USE AS FM "EASYSAT"

The Amateur Radio on the International Space Station (ARISS) program this week put one of the two ham stations aboard the ISS to use as a U/V (Mode B) FM repeater (437.80 MHz up and 145.80 MHz down). The new Phase 2 ISS ham gear--primarily used for packet operation and tests and briefly by Expedition 9 Commander Gennady Padalka, RN3DT, during Field Day 2004--was pressed into service for several days as a low-Earth-orbiting FM "EasySat." The crossband repeater experiment, announced August 28, was shut down with the other ARISS gear September 2 in preparation for a September 3 space walk. The Amateur Radio equipment aboard the ISS will be powered back up no sooner than 1700 UTC on September 4, said ISS Ham Radio Project Engineer Ken Ransom, N5VHC.

"Mike Fincke [KE5AIT] reported hearing stations actively using the repeater over North America, the southern portion of South America, South Africa, Europe, Australia and Japan," Ransom said. He got lucky on the ISS repeater September 2, snagging a QSO with V31KD in Belize City, Belize (EK57).

The Phase 2 gear was scheduled to return to RS0ISS packet operation following the space walk, but the repeater experiment could be back for a "repeat" performance. ARISS International Team Chairman Frank Bauer, KA3HDO, said the crossband repeater test provided an opportunity to further experiment with the ISS Amateur Radio system.

Last December, ISS Expedition 8 Commander Mike Foale, KB5UAC, set up a new Kenwood TM-D700 Phase 2 dualband transceiver in the ISS Zvezda Service Module--the crew's living quarters. With the help of the

ARISS Japan team, Kenwood donated the TM-D700 transceivers to ARISS and made specific hardware and firmware modifications--including limiting its power output to a maximum of 25 W--to prepare it for flight. Plans call for using the Phase 2 station at 10 W output during ARISS school group QSOs, starting with the arrival of the Expedition 10 crew this fall.

Employment opportunity at ARRL Headquarters: ARRL--the national association for Amateur Radio seeks a Chief Operating Officer at its headquarters in Newington, Connecticut. The COO's primary objective is to manage and direct League operations relating to publications, marketing and sales, membership services, field and educational services, volunteer examinations, laboratory and Web site. Major areas of responsibility include employing and directing staff members, maintaining performance standards; working with other League officers on budgetary and management matters; identifying future trends affecting demand for headquarters support and services, and providing technical resources to support ARRL advocacy efforts. Qualifications include an MBA or equivalent experience or education, demonstrated success in organizational management, the ability to inspire excellence and to work effectively as part of a team of staff and volunteers, and a strong background in Amateur Radio and the ARRL. Please read the official announcement <<http://www.arrl.org/announce/jobs/#coo>> for complete details. Résumés and any supplemental information go to David Sumner, K1ZZ, Chief Executive Officer, ARRL, 225 Main St, Newington, CT 06111. Applications must be received by October 8, 2004. ARRL is an Equal Opportunity Employer.

JOHN CHAMPA WINS AWARD!

John Champa, K8OCL and Brian Justin, WA1ZMS, were named joint winners for the 2003 ARRL Microwave Development Award (they're always for the previous year).

The ARRL Microwave Development Award is given each year to a licensed radio amateur or to individuals who are licensed radio amateurs whose accomplishments and contributions are of the most exemplary nature within the framework of microwave development, i.e., research and application of new and refined uses and activity in the amateur microwave bands, along with the millimetric bands above 30 GHz. This

includes adaptation of new modes both in terrestrial formats and satellite technique(s).

(Editors Note: We're inviting the ARRL Great Lakes Director up to formally present the award to John at a future LARK meeting)

REPEATER UPGRADE PLAN UNVEILED

Now that the summer is winding down, we can focus our attention to repeater upgrade plans for the LARK 146.68 repeater. We're not casting any shadows on all the fine work done by previous LARK members, it's just time to consider equipment upgrades.

Basically, our existing system has served the Klub for more than 20 years. Many folks were responsible for both assembling and maintaining the current system, but the "state of the art" has changed significantly.

Consider too, that finding spare parts, and expertise to continue the maintenance program, is starting to run scarce. If the LARK is to continue to provide emergency communications in the Livingston County area, we must strongly consider a path to a new repeater system.

Our upgrade plan is really simple. We want to preserve the investment in the feedline, duplexer, and antenna (if possible). We'd like to replace the repeater transmitter, receiver, and controller with more current versions. Finally, we'd like to consider additions to our basic repeater that will improve coverage throughout the Livingston County area.

The first steps in our upgrade plan are underway. We have electrically inspected the duplexer, feedline, and antenna. It is the belief of the technical committee that these components may be used as they are, or may require minor repairs. A work crew has been scheduled to affect physical inspection and or repair / replacement.

Our second step was to select a basic repeater package (transmitter and receiver) that could be placed into operation for the "next 20 years". As the lead for the technical team, Jim WB8AZP, took on the task of gathering quotes for a brand new repeater system, tuned to the LARK frequency. Price quotes for a repeater, power supply, and cabinet were solicited from representatives of Motorola, General Electric, ICOM, and

Kenwood, for a 100 watt continuous duty repeater. The responses are summarized below:

- Motorola MTR2000 repeater with supply and cabinet \$ 5612.00
- GE Master III repeater and supply (no cabinet) \$ 6624.00
- Kenwood TK7500 repeater with supply and cabinet \$ 6614.00
- ICOM FR4UHW repeater with supply (no cabinet) \$ 6823.00

Based on these responses, we have chosen the Motorola MTR2000 system as the best suitable replacement.

This brings us to controller selection. A repeater controller is responsible for identifying, repeater control, autopatch, voice id's, and many other duties in a repeater station. Additionally, we need to select a controller that provides for "ad hoc" voice messaging, and expansion for any future needs. We have selected a Link Communications RLC Club controller, and its matching DVR-16 digital voice recorder as excellent replacements for our 20 plus year old controller and DVR. Total price for the controller and DVR is \$ 1465.00.

After replacement of the repeater and controller, the technical team wants to take on the challenge of making the system more usable for those members with handheld radios. A plan has been created to add multiple receivers to the system, along with an electronic voter, that would select the best signal from multiple sites, and present it to the repeater transmitter. Although this represents an expensive challenge, the overall result should yield a system that can be worked from just about anywhere in the county using a 5 watt handheld. Again, work on the multiple receivers and voter would not begin until after the repeater has been upgraded.

Although this upgrade looks expensive, when balanced with the expected life of the equipment, and the notion of factory tuned components yielding the best performance possible, and the expected life of the new system, it's actually very reasonable. Compared to the costs of the old system, the prices have only increased about \$1500 over 20 years.

We'll be discussing this upgrade plan, and ways to fund it, at our next LARK meeting.



LARK AUGUST PICNIC...(IF IT'S AUGUST, WHY ALL THE COATS?)



Food was good, Hamburgers were added to the menu, but the weather.....



"You can't print this picture, because I told my Dad I was going to a movie, and if he finds out I went to the LARK picnic, they'll drive me out of the Red Ryders."



The Flea Market at the Jackson Swap



"I parked my truck in a nice, safe place" (Hurricane Charley took care of it)



"I thought I left my tools in the truck..."

OPERATION CARE

WHAT A WONDERFUL TIME THAT WAS HAD BY ALL AT OPERATION CARE. WE MET A LOT OF INTERESTING PEOPLE AND WERE ABLE TO TALK ABOUT HAM RADIO TO SEVERAL PEOPLE THAT WERE INTERESTED IN LEARNING MORE ABOUT OUR HOBBY.

WE WERE VERY PLEASED WITH THE DONATIONS FROM THE LOCAL MERCHANTS AND THAT HELPED TO MAKE OUR OPERATION A PLEASANT EXPERIENCE.

OUR FINAL TOTAL WAS \$694.65 AND WAS UP FROM OUR MEMORIAL DAY OPERATION. I CONTRIBUTE THIS TO SEVERAL THINGS. NUMBER ONE THE WEATHER WAS GREAT. NUMBER TWO THE ATTITUDE OF EVERYONE WORKING THE OPERATION WAS JUST FANTASTIC. THAT GREAT ATTITUDE RUBS OFF ON PEOPLE YOU MEET AND THEREFORE MAKES EVERYONE FEEL WELCOME. THE RESULT IS BETTER DONATIONS.

I WANT TO THANK EVERYONE THAT TOOK THE TIME TO HELP OUT WITH OPERATION CARE. IT IS TRULY A GREAT EVENT AND A WORTHWHILE ONE AS WELL. ALL OF YOUR EFFORTS SURE PAID OFF. A SPECIAL THANKS TO MARY KC8SER FOR ALL THE MEETINGS, PHONE CALLS AND EXTRA HELP IN GETTING THIS ALL SET UP. I TRULY COULD

NOT HAVE DONE IT WITH OUT YOU. YOUR ENCOURAGEMENT HAS BEEN
FANTASTIC.

CLAIRUS KEEP
KC8QQN
OPERATION CARE CHAIRPERSON

It is greater than God
More evil than the Devil

Rich people need it
Poor people have it

And if you eat it, you will die...what is it?

(Answer at Klub meeting...)