



The Spirit of '76 and '88

Number ONE in Ohio!



Newsletter of the Lake Erie Amateur Radio Association

Editor: Alex Manuk, WD8JMM

Publisher: Jeannie St. Marie, KC8MNW

November 30, 2004

LEARA Holiday Social Meeting

The Trustees of the Lake Erie Amateur Radio Association cordially invite you, and your family and friends, to join us on Tuesday, November 30, 2004 at 6:30 PM at Dimitri's Restaurant in the Mid-Town Shopping Center, Snow & Broadview Rd. in Parma.

Details are on page 4.

November, 2004

In This Issue

Officers/Trustees	2
de W2THU	2
LEARA Info	2
Zoo Crew	3
Association News	4
Meeting Recap	4
Election Results	5
Door Prize Winners	5
Pumpkin Patrol	5
Survey Results	6
Repeater ABC's	7
Fox Hunt Update	8
Hamfest & Exam Listing	9

It's that time again...

de Marv Grossman, W8AZO
Membership Chairman

We began taking membership renewals at the October meeting. To the 165 (or so) members who are now paid through 2005 or beyond... thanks for supporting LEARA!!

Everyone who receives the "snail-mail" version of this newsletter, please check the message on the mailing label. We aren't infallible; a renewal could have been missed. If your label says "It's time to renew dues for 2005!" and you've already paid, please contact Marv/W8AZO at 440-248-0031, on the air, via e-mail MarvG@apk.net, or any other way that works. If you do not get a "snail-mail" version of the newsletter, reminders will be going out in January 2005. If you don't get one, you must have paid.

Call For Cards...

de Steve Kinosh, KB8UTA

Anyone that attended field day or the Cleveland hamfest saw the display board that we are building for our functions. We have a LOT of room left for members' QSL cards so, if you have one available, bring it to the holiday meeting or send it to Steve Kinosh KB8UTA (address is correct in all the call sign databases)

OFFICERS	
President Bob Winston, W2THU	W2THU@leara.org 216-771-3314
Vice President Eric Jessen, N8AUC	N8AUC@leara.org 440-734-3146
Vice President Bryan Torok, N8OOF	N8OOF@leara.org 440-871-5456
Secretary Jeff Garvas, N8YNR	N8YNR@leara.org 216-552-4368
Treasurer Dave Foran, WB8APD	WB8APD@leara.org 440-942-0618
License Trustee Eric Jessen, N8AUC	N8AUC@leara.org 440-734-3146
TRUSTEES	
Cliff Bade, W8CJB	W8CJB@leara.org 440-235-1122
Raye Bayun, N8NAP	N8NAP@leara.org 146.760/R
Alex Manuk, WD8JMM	WD8JMM@leara.org 216-459-8523
Marv Grossman, W8AZO	W8AZO@leara.org 440-248-0031
Tom Long N8QXA	N8QXA@leara.org 440-356-0741
Sara Cechner, KC8KSU	KC8KSU@leara.org 440-942-8787
Jim Ozello, N8XDO	N8XDO@leara.org 216-475-7218
John Radney, KC8FOC	KC8FOC@leara.org 216-751-7067
Grant Hedrick, KV0T	KV0T@leara.org 440-944-2184
Tom Bishop, W8TAB	W8TAB@leara.org 440-331-9374
TRUSTEES EMERITUS	
Al Amster, W8HYG	Al Severson, AB8P (SK)
Fred Collins, W8ADW	Pat Shreve, W8GRG (SK)
POINTS OF CONTACT	
"Sunshine" Don Raith, N8DJG	216-921-7546
Radio Officer Raye Bayun N8NAP	146.76/R
Radio Officer Bryan Torok, N8OOF	146.88/R
<p>The <i>Spirit of '76 & '88</i> is published monthly except in December. Contributions must be received by the 1st of the month.</p> <p>Editor: Alex Manuk, WD8JMM</p> <p>E-mail: editor@leara.org</p>	

de W2THU...

About half of the club membership voted in last month's election and the result was no surprise. As usually happens, the five incumbent trustees who were required to run were reelected. Chalk it up to name recognition or membership approval of the way your trustees are doing things. Thanks to Steve, KB8UTA for challenging the incumbents. If there is a resignation during the year, then we may see Steve on the Board after all. Congratulations to Raye N8NAP, Tom N8QXA, Tom W8TAB, Jim N8XDO and Jeff N8YNR for retaining their seats on the Board. Thanks also to the election committee for doing a fine job in conducting a flawless, chadless election.



Well, the long awaited survey was also returned with the ballots. As promised earlier in the year, we wanted our members to provide some feedback so we could learn if the club is meeting your expectations. Kelly, KC8UIX designed the survey, tabulated the results, and reported her findings elsewhere in this month's Newsletter. So, what did we learn?

The members overwhelmingly liked the idea of receiving special announcements about LEARA via email. This has already been accomplished thanks to Dave, WB8APD and Marv, W8AZO putting together a mailing list consisting of all of your email addresses that are recorded in our database. Most of these addresses came from

(Continued on page 8)

LEARA is a not-for-profit organization dedicated to Amateur Radio and to Public Service. Club information packets and applications for membership are available from **Marv Grossman, W8AZO, 440-248-0031** or may be downloaded from our web site at www.leara.org. Annual membership is \$18.00. **LEARA's address** is: LEARA, PO Box 22823, Beachwood, OH 44122-0823.

LEARA is an **ARRL**-affiliated club. When you join **ARRL** or renew your membership, **LEARA** benefits monetarily if you do so through the Club. Send **ARRL** applications/renewals to the club treasurer (Dave Foran/WB8APD, 5439 Nan Linn Dr, Willoughby OH 44094-4365). Payment (check or money order) must be made out to **LEARA (NOT ARRL)**.

Membership Meetings are held the last Tuesday of each month except December at Dimitri's Restaurant, 1830 Snow Rd., Parma, OH (in the Mid-Town Shopping Center, just west of Broadview Road). Dinner is served at 6:30 PM. The regular meeting begins at 7:30 PM. Meetings are open to all interested persons. You may attend without eating, but **reservations are required** if you do wish to eat. Call **Marv Grossman, W8AZO at 440-248-0031** or make your reservation online at www.leara.org.

Trustees' Meetings are held on the second Saturday of odd numbered months at 9:00 AM at the Parma-Snow Branch of the Cuyahoga County Public Library, 2121 Snow Rd., Parma, OH (opposite the Mid-Town Shopping Center). Meetings are open to all current members of LEARA.

Thanks For Your Help!

de Alex Manuk, WD8JMM

I would like to thank the following individuals for contributing to the newsletter in 2004. After taking over the reins in mid-year, I've learned that this newsletter is truly a community effort, and I couldn't do it without you! The contributors for 2004 are:

Mike DiTurno, KC8OWL
Bob Winston, W2THU
Bill Chaikin, KA8VIT
Joe Swartz, N8IPC
Sean Carey, WA8SCC
Sara Cechner, KC8KSU
Peter Greene, N8WGE
Perry Trunick, KB8AYQ
Marc Flanagan, KC8SIE
T.J. Powell, N8UIR
Steve Kinosh, KB8UTA
Joe Phillips, K8QOE
Eric Jessen, N8AUC
Pat McClain, N8RKP
Jeff Garvas, N8YNR
Mary Grossman, W8AZO
Ray Suing, N8EQT
Tom Kimball, KA8BZB
Bryan Torok, N8OOF
Jeannie St Marie, KC8MNV

If I've missed anyone, please excuse my oversight, and for everyone who hasn't contributed yet, 2005 will be a whole new opportunity to take part!

Thanks again, and 73

Welcome to the Club

LEARA proudly welcomes the following hams who recently joined (or rejoined) LEARA and who have been formally approved by the LEARA Trustees.

New Members

Roy McClure, KD8AJX
Bruce Thorne, KE8TI
Gary Zimmet, WA8TJL

They will be fine additions to our Association. If you hear them on the air, say hello and make them welcome.

The Zoo Crew Needs You!

de Tom Bishop, W8TAB



In the wake of the possible decommissioning of the amateur radio station at the Cleveland Zoo, LEARA has been approached to take over the stewardship of the Zoo project. The LEARA Zoo Committee currently consists of Bob Winston, W2THU, John Radney, KC8FOC, and myself, Tom Bishop, W8TAB. But we need your help too!

The station at the Rain Forest in the Experimenters Hut consists of both HF and VHF stations so there is something there for all license classes, as well as an educational opportunity for both the student community and the general public. This is also an opportunity to Elmer our fellow hams who might have an interest in operating on new modes like IRLP in the VHF band or becoming more active on the HF bands.

The whole idea of the Zoo project is to have a venue where the local Amateur Radio Community can have a chance to expose the general public and especially young school children to the wonderful world of Ham Radio. The station is located in the Rain Forest Experimenter's Hut to simulate a jungle expedition's raw environment and to show the zoo visitors how explorers all over the world depend on Ham Radio to communicate with the civilized world.

There is also the possibility of forming a Zoo Net with other Zoos in the world with like programs and to attempt to actually communicate with real expeditions in the same spirit that school kids the world over have used to talk to the International Space Station via Ham Radio.

There is a chance to develop a curriculum with zoo and school officials to formalize how and what we teach to students and life long learners of the community. Maybe it can involve making advance visits with the schools to preface what the students can expect to be exposed to when they make their field trip to see the animals and the support functions that make gathering all the science data possible and worth while.

Even if you think you can't do this because you don't have HF privileges, YOU CAN. There is a two meter rig and with IRLP you can still talk all over the world. We would like to enlist two person volunteer teams to work
(Continued on page 7)

Association News

Holiday Meeting Info (cont'd)

This year's holiday social meeting will be held at Dimitri's restaurant in the Midtown shopping center, November 30, 2004. Dinner will be served at 6:30 PM.

This year's menu consists of Chicken Paprikash, Chicken Parmigiana, Broiled Ribeye Steak (cut from prime rib), Veal Marsala, Broiled Alaskan Salmon, Orange Roughy, or Garden Fresh Pasta (vegetarian).

Dinner includes minestrone soup, salad, mashed potatoes, rolls and butter, beverage (coffee, tea, iced tea, or pop) dessert (specify: ice cream or baklava). Dinner is \$15.00 per person, and **reservations are required.**

Following dinner we will have entertainment arranged by our President, Bob Winston, W2THU. Bob hasn't been forthcoming with what the entertainment will actually be, but we've made him promise to leave the accordion at home.

As in the past, we will have some 'extra' door prizes as well, though the details have not been arranged at press time.

Please **RSVP** to Marv Grossman at 440-248-0031, or at <http://www.leara.org> by **8:00 p.m. on Monday, November 29th**.



Check out the newsletter in color at
www.leara.org
 Follow the Newsletters link on the
 left side of the page

October Meeting Recap

de Alex Manuk, WD8JMM

October's meeting provided something for everyone. While the tellers and election committee saw to the proper conduct of LEARA's annual election, the rest of us enjoyed an exciting competition with our Homebrew Contest.



Several members took the time to bring in projects and share with the group some of the construction projects that have kept their interest over the past year.

Our excellent judging committee chose, of the projects submitted, two winners. Winner of the most unique project was John Radney, KC8FOC, for his lampshade 2 meter antenna.

Winning the most useful category was Jacob Kinosh, KC8GHX, for his converted PC power supply.

Also exhibiting projects this year were John Gibbons, N8OBJ, Jim Ozello, N8XDO, and Steve Kinosh, KB8UTA,



Association News

Election Results

Trustees

A total of 137 ballots were cast in this year's election. The following five candidates received the most votes and were declared elected by the teller committee:

Tom Bishop, W8TAB
Raye Bayun, N8NAP
Tom Long, N8QXA
Jeff Garvas, N8YNR
Jim Ozello, N8XDO

Officers

The following were elected as officers of the Association at the November Trustees' meeting.

President: **Bob Winston, W2THU**
 Vice President: **Eric Jessen, N8AUC**
Bryan Torok, N8OOF
 Secretary: **Jeff Garvas, N8YNR**
 Treasurer: **Dave Foran, WB8APD**
 License Trustee: **Eric Jessen, N8AUC**
 Radio Officer: **Ray Bayun, N8NAP**
Bryan Torok, N8OOF

Marv Grossman, W8AZO, continues as the Membership Chair. Those having any membership questions should contact Marv.

Congratulations to all those elected.

Pumpkin Patrol Report

de Joe Swartz N8IPC



It was a beautiful Halloween evening in Shaker. Ghosts, goblins, and other strange creatures roamed the city collecting candy from the residents. Hams continued a tradition that began in 1988 by assisting the Shaker Police Department by driving around the city v-e-r-y s-l-o-w-l-y and reporting any problems or questionable activity to Sgt. Bob Doles KB8CQX, who would direct the pros to handle it.

For the most part, the night was uneventful until the 8:00 PM witching hour approached. Then a group of teenagers decided that a fight was in order. The pros had it under control in short order and several hams kept an eye on the group as it left the city.

Riding with Sgt. Bob Doles KB8CQX was his lovely wife, Marge. Others who participated were Don N8DJG; Tom KA8BZB; Bill N8UPZ and his lovely wife, Betty; Rich N8RB; Mike K8EHP; John W8NRA and his lovely wife Ginny; John KC8FOC; Ken KG8DN; Jeff N8YNR (who brought his fire extinguisher just in case); Bob W2THU; Mat KC8NZJ; Bill N8XDM and his fiancée Marie; Eric KF8YK (who was on duty as a Shaker Fire Department EMT, but monitored the action closely), and new grandparents Joanne KB8TGX and Joe N8IPC.

October Door Prize Winners

Soldering Iron:
Frank Hvizdos, W8ACQ

Lighted Screwdriver:
Eric Jessen, N8AUC

Screwdriver set:
Sara Cechner, KC8KSU

Harley Telephone:
Andrew Juchnowski, AB8MO

Surge Protector:
Michael Tomechko, KB8YKE

Free Dinner: **Frank Hvizdos, W8ACQ**

Repeater Directories:
Jeanne St Marie, KC8MNW
Joe Prokop, KC8RAN
Tom Bishop, W8TAB
Jess Noeth, KD8ACJ
Darrin Turk, K8DMT
Jack Andrisin, W8JAK
Bryan Torok, N8OOF
Jim Ozello, N8XDO



50/50 raffle (\$28 cash):

Carol 'Lucky' Ozello



Survey Says...

de Kelly Manuk, KC8UIX

A huge thanks to all of you who chose to participate in the 2004 survey! We received almost 100 replies and are using them to improve LEARA as a whole. In an effort to save space, here are the results for the checkbox questions.

1. Why did you join LEARA? Public Service **31** Support repeater **61** Fellowship **54**
2. I would prefer general meetings: (A) Tues eve **57** Fri eve **6** Sat am **6** (B) With a meal **39** (C) Other: **5**
3. I would participate in the following special interest groups (with a special meeting date/time)
 - VHF/UHF (A) eyeball **6** on the air **20** either **9** (B) weekly **4** monthly **21**
 - HF (A) eyeball **4** on the air **4** either **6** (B) weekly **2** monthly **9**
 - VE examiners (A) eyeball **2** on the air **0** either **8** (B) weekly **1** monthly **7**
 - Digital Modes (A) eyeball **7** on the air **8** either **12** (B) weekly **2** monthly **15**
 - Take upgrade classes, if offered (circle one) Yes / No **25 yes 14 no**
 - Other _____ (A) __ eyeball __ on the air __ either (B) __ weekly __ monthly;
ARES (no times/modes selected) and Homebrew (all times and modes selected)
7. Would you be interested in promoting amateur radio to students in schools or in an area directed toward teens? (Yes / No) **35 yes 15 no**
8. Have you visited the LEARA website? (<http://www.leara.org>) Yes / No **58 yes 22 no**
9. Would still like to receive the newsletter in the mail or would you like to see it in color and print it out yourself in color or black & white from the Club Website? __mail __email __both
42 mail 22 email 13 both
10. Would you be interested in receiving email regarding the status of the repeaters or for special announcements?
 Yes / No **57 yes 1 absolutely 12 no**
11. I would support an increase in LEARA dues for the purpose of raising funds to buy/build/maintain a LEARA clubhouse to be located somewhere on high ground in Cuyahoga County.
 - __ Yes (circle one): \$5/month **10**, \$10/month **2**, \$15/month **4**
 - __ No, I would quit before paying a dime more. **9**
 - __ No, I don't think this is something LEARA should do, but would be interested donating time and/or money to a shared clubhouse or resource in Cuyahoga County to be used by all area clubs **15**
 - __ Other **23**
12. Are you interested in Public Service event volunteerism? Yes / No / Maybe
33 yes 14 no 19 maybe

Repeater ABC's—part 2 of a series

de Eric Jessen, N8AUC

How does a repeater work - part 1?

It is safe to say, that if it had not been for the advent of the FM repeater, ham radio in the VHF and UHF frequency bands would not be what it is today. Repeaters act as range extenders that allow low powered and/or mobile stations to communicate over significantly greater distances than they could on their own.

In its simplest form, a repeater consists of a receiver, a transmitter, a duplexer, an antenna, and a controller to make everything work together. The receiver is tuned to the repeater's input frequency, which is the frequency on which you transmit. The controller receives a signal from the receiver telling it that there is a signal on the input. The controller then turns on the transmitter. Your audio is taken from the receiver output, and passed through an audio delay line in the controller, and fed to the input of the transmitter. Typically the repeater transmitter runs from 50 to 100 watts of RF output. A high profile repeater is always located on the top of a tall building, or a big hill. This ensures that the repeater antenna is very high, and in the clear. The combination of antenna height, and high transmitter output power is what gives the repeater its effectiveness.

Why is there an audio delay line in the controller? This is present to give the controller time to work, without losing any of the information you transmit. The delay line becomes even more important when more advanced functions are incorporated into the controller. LEARA's re-

peaters have lots of advanced features. You can hear the effect of the delay line if you have a second receiver handy. When you hear someone talking on the repeater, tune your second receiver to the repeater output frequency, and tune your main radio to the repeater input frequency. If you are able to hear the transmitting station on the input frequency, you will immediately notice that you will hear the speech on the input frequency well before you hear that same speech come through the repeater transmitter. The effect can be a little disorienting.

The repeater controller is the brains of the operation. It normally contains: a microprocessor, a real time clock, a countdown timer, some memory (both ROM and RAM), a DTMF (touch tone) decoder, a phone line interface, the audio delay line, signal processing circuitry in the form of amplifiers and filters, and a lot of logic input and output lines to control the receiver and the transmitter. More modern controllers also include a voice synthesizer, and a voice digitizer. These are used for generating computerized voice ID messages, for creating voice mail (yes some controllers let you leave recorded voice messages for other users), and for creating custom pre-recorded ID messages. The program that operates the controller allows commands to be sent that enable the repeater to be remotely controlled. The codes and commands that control the repeater are normally only available to the license trustee and the control operators. This is because they are legally responsible for ensuring the proper operation of the repeater.

(stay tuned for more next month...)

The Zoo Crew (cont'd)

(Continued from page 3)

the Zoo Station, hence "The Zoo Crew" is born. One person can talk to the zoo visitors while the other works the radios and talks to the world.

If you are an experienced operator then you have a chance to be an Elmer and share your knowledge. If you're new to what we're doing with the Zoo Station then you have the opportunity to learn and at the same time perform some very worthwhile community service for both the amateur radio community and the general public.

This opportunity is not only open to LEARA members but is also open to any qualified Radio Amateur wishing to participate. We will be establishing a procedure for

qualifying lead control operators for the Zoo project. After that, you'll be able to come on down and volunteer on the ZOO CREW when your time and schedule permit. If you are retired or work 2nd or 3rd shift you might be perfect to help man the station during core school visiting hours, usually 9am to 3pm on weekdays. This doesn't mean that we don't need weekend operators too. We want to keep in front of the general public during their leisure hours when they visit the zoo.

We need your help. Join the Zoo Crew! Contact Bob Winston, W2THU and volunteer. You'll be glad you did! .

de W2THU (cont'd)*(Continued from page 2)*

you when you filled out your membership application. Since many folks have changed their email address over the years, be sure that LEARA has your current address in order to receive these bulletins.

The survey also showed that a majority of survey respondents are willing to participate in public service. This is good to know because LEARA provides communications for many charitable organizations. We are always looking for more volunteers to bolster our regular group of committed hams who come out time after time to support these activities. So, if you said that you are interested in public service, but have not yet done so, please be sure to contact the designated coordinator for the next event listed elsewhere in this Newsletter.

Twenty five of you indicated that you are willing to take upgrade classes if offered by LEARA. This is a significant number and merits the attention of the Board. We used to offer code and theory classes to upgrade to General. Hopefully we can reenlist the same instructors who did an excellent job in helping some of our members to get their General ticket a number of years ago.

Most importantly, 35 of you said that you are interested in promoting amateur radio to students in schools or to teens. This is a very worthwhile project because youth are the lifeblood of our great hobby. So many of the old timers became interested in ham radio when they were in school. We need to bring more school children into amateur radio. I would like to see our club follow through by

demonstrating ham radio at area schools. This is already being done by CARS and there is a need for more clubs to follow suit. If you were one of the 35 people who answered yes to this survey question, please contact me.

The Board, at its November meeting, revisited LEARA's commitment to take over the RainForest station at the zoo. Several concerns came up that were not thought through at the September Board meeting. There was considerable extended discussion about the ramifications of this project. The overwhelming concern is whether we can find enough hams to keep the station on the air during the weekdays. I have agreed to spearhead this project. So far, we have three volunteers. We are really looking towards the retired, the 2nd shift worker, or a ham who typically has a weekday off such as a police officer or fire fighter. If you can help, please contact me.

Finally, this is the time of year when I try to thank everybody who has helped LEARA accomplish all of the wonderful things that our club does for amateur radio and the general community. This year, I will not risk leaving anybody out by simply saying thank you to all who have contributed in any way to supporting our repeaters, website, public service, Newsletter, Field Day, programs, elections, nets and other fine activities that we share in the common cause that we call amateur radio.

Since this is the last Newsletter of 2004, I wish all of you a safe and happy holiday season and extend my best wishes for a healthy and happy New Year!

Fox Hunt Extravaganza!*de Mike Cegelski, K8EHP*

Sunday, 24 October, 2004 at 1500 Hrs. local time saw the launch of a much awaited subject event. A hearty TNX goes to all of the participants who reveled in a beautiful, warm fall day to take to the highways and byways of our great community in search of the elusive electronic fox.

A tip of the hat to our three top winners. Coming in first was Bryan (N8OOF) at 65 minutes. Rolling in at second place was the team of Steve (KC8DJV) and Del (N8OFF) at 85 minutes. Strutting right in at third position was Hank (WB8NRI) at 95 minutes.

A great time was had by all and at the post event gala, discussions for another hunt were brisk with the promise for a repeat challenge to occur in the near future. Keep tuned for further developments.

John Brant, W8WAB

LEARA has learned that John Brant, W8WAB became a silent key November 10, 2004. We extend our sympathy to John's family. He will be dearly missed.

Hamfest Listing

February

6 NOARS Winterfest
Northern Ohio Amateur Radio Society
<http://www.geocities.com/k8krq/winterfe.htm>
Talk-In: 146.700/R-
Contact: Tom Porter, W8KYZ
161 Herrmann Drive
Avon Lake, OH 44012
Phone: 440-930-9115

13 Mid*Winter Hamfest and Computer Show
InterCity ARC
<http://www.iarc.ws>
Talk-In: 146.94 (PL 71.9)
Contact: Deane Wrasse, KB8MG
1094 Beal Road
Mansfield, OH 44905
Phone: 419-522-9893
Email: deanwrasse@yahoo.com

March

**19 Great Lakes Division Convention
Toledo Mobile Radio Association**
Toledo, Ohio
Contact: Brenda Krukowski, KB8IUP
9408 Salisbury Road
Monclova, OH 43542-9700
Phone: 419-260-4310
Email: kb8iup@arrl.net

**20 TMRA Hamfest
Toledo Mobile Radio Association**
<http://tmrahamradio.org>
Contact: Brian Harrington, WD8MXR
4463 Holly Hill Drive
Toledo, OH 43614
Phone: 419-385-5624
Email: bharrington@mco.edu

April

3 Lake County ARA
<http://www.lcara.org>
Contact: Rocky, KB8WFD
7480 Fern Drive
Mentor-on-the-Lake, OH 44060
Phone: 440-209-8953
Email: kb8wfd@adelphia.net

Volunteer Exam Dates and Locations

<u>Date</u>	<u>Location</u>	<u>Date</u>	<u>Location</u>
11/21	Elyria		
12/4	Wickliffe		
12/14	Cuyahoga Falls		
12/19	Elyria		
1/9	Independence		

Akron, Pioneer AR Fellowship - 2324 Manchester Rd., Akron, OH, 44314. Pre-registration preferred, check-in 6:30 PM, test at 7:00 PM, walk-ins allowed. **Contact:** Ronald D. Lieving, 330-724-5981.

Akron, Summit Co. American Red Cross - 501 W. Market St., Akron, OH, 44303. Testing at 3:00 PM, walk-ins allowed. **Contact:** Bruce M. Ferry, 330-929-2766, ak8b@arrl.net

Bentleyville - Bentleyville Town Hall, 6253 Chagrin River Rd., (corner of Solon Rd & River Rd) Bentleyville, OH 44022. Testing begins at 9:00 AM, walk-ins allowed. **Contact:** Robert Gauss, N8ZB, 330-562-3328, w8cbr@yahoo.com

Cuyahoga Falls - 2015 3rd St., Cuyahoga Falls, OH 44221. Test at 7:00 PM, walk-ins allowed. **Contact:** Steven Greathouse, 330-724-2247.

Elyria - American Red Cross, 2929 West River Rd., Elyria, OH, 44035. Testing at 1:00 PM, park in rear and enter through back door, walk-ins allowed. **Contact:** Charles S. Hall, 216-433-3036, ve@w8hf.com, www.w8hf.com

Independence - Independence Town Hall, 6652 Brecks-ville Rd., Independence OH, 44131. Doors open 9:00 AM. Pre-registration is appreciated, walk-ins are welcome. **Contact:** Gary S. Dewey, 216-642-9705, gdewey@en.com

Wickliffe - Amateur Electronic Supply (AES), 28940 Euclid Avenue, Wickliffe, OH 44092. Testing at 12:00 PM, Walk-ins are welcome. **Contact:** Scott Farnham, 440-256-0320. Do NOT call the store for information on VE testing.

**** HAMFESTS - Many hamfests provide VE testing. ****

INSTRUCTIONS FOR TEST CANDIDATES

For VE testing one must bring the original and copies of the current license and CSCE forms (if applicable), identification, and the exam fee. ARRL VEC's exam fees are \$12.00. Check with the contact person in advance for specific testing site requirements and any special test accommodations needed.



LEARA — The Lake Erie Amateur Radio Association

VOICE REPEATERS:

53.230/R-
146.76/R-
146.88/R-
224.90/R-
444.40/R+
444.70/R+

- Highland Hills (136.5 Hz tone)
 - Highland Hills (Use 110.9 Hz tone for remote inputs in Lakewood, Newbury & Willoughby)
 - Lakewood (Requires 110.9 Hz tone)
 - Lakewood (141.3 Hz tone)
 - Highland Hills (131.8 Hz tone) *IRLP Node #4282*
 - Lakewood (131.8 Hz tone)
- (.76, .88, .90 and .70 offer emergency and member-only autopatch lines.)

PACKET NODES: CLE1 145.01 MHz: CLE5 145.05 MHz: CLEV220 223.70 MHz

These nodes are part of the Cleveland Net Cluster in K8EIW's backbone system.

GENERAL: NBRY
NBRYX
LEARA

- 145.07 MHz & 223.70 MHz (KA-NODE)
- 145.07 MHz ⇔ 223.70 MHz Gateway
- 145.07 MHz & 223.70 MHz PBBS

INTERNET:

- www.leara.org
- To subscribe via e-mail, send a message to: spirit76-request@leara.org
Put subscribe in the subject area and your name and callsign in the body.

Affiliated



Club

Northern Ohio



Affiliate