



The Spirit of '76 and '88



OCTOBER

Newsletter of the Lake Erie Amateur Radio Association

2010

Editor: Ken Kane, KG8DN

Publisher: Jeannie St. Marie, KC8MNW

Elected Electronically? Annual Selection of New Board Members Takes Place By Web Tally at Meeting October 26th

~ of course, votes on each paper ballot that is submitted on time will still be included!

The annual meeting of the Lake Erie Amateur Radio Corporation will be held on TUESDAY, OCTOBER 26, 2010, following dinner. Notice has been given either by email or by direct mail to all members in good standing of the Lake Erie Amateur Radio Association (LEARA).

The agenda for the meeting includes the Election of Trustees, and for the first time this election is being conducted through a secure email procedure as well as by paper ballot.

Each LEARA member filing an email address with LEARA received an e-mail this month on Thursday, October 7, from leara@votingplace.net with a unique password and with instructions for casting your ballot electronically. Members are asked to report any problems or difficulties in voting to election committee co-Chair, Ron Jakubowski, K2RJ (k2rj@leara.org) or (440) 539-1196.

The electronic voting period is from Thursday, October 7, at 5:00 AM through Friday, October 22, at 11:45 PM.



This gives the Election Committee time to address any last-minute electronic voter issues with a paper ballot, if this becomes necessary, and gives the vendor, **Votingplace.net**, time to provide us with a list of those members who voted electronically so we can equitably handle walk-in ballot requests at the meeting.

Paper ballots will be available and accepted at the meeting until 7:30 p.m. After all tabulations are verified, the results will be presented to the attendees. They will also be published in the next Newsletter.

Arrival before 7:30 PM is recommended.

Dinner will be served at 6:30 PM.

At 7:30 PM the election will close.

The annual meeting of the corporation as well as the tabulation of election results will begin at 7:30 PM.

The dinner and meeting are at our usual place, Dimitri's Restaurant, at 1830 Snow Road, Parma, Ohio (in the Mid-Town Shopping Center just West of Broadview Road). Meetings are open to all interested persons. You may attend without eating, but reservations are required if you do wish to eat. Restaurant service is available only for those who purchase dinner. If you are attending the meeting only, kindly purchase beverages at the bar and bring them to your table. The dinner menu will consist of Steak, Broiled Boston Scrod, or Chicken Parmigiana for \$16. Also available is a vegetable and pasta dish for those who prefer a meatless dinner. The dinner includes a salad, main course, dessert, coffee or iced tea, and gratuity. (Please note, bar service and soft drinks are not included.)

RESERVATIONS ARE REQUIRED BY 11:00 A.M. OF THE MEETING DATE.

Please call in your reservation and your menu choice to Marv Grossman, W8AZO, at 440-248-0031. You can also visit www.leara.org and make your reservation through the club's website.

-AR-

OFFICERS	
Alex Manuk	WD8JMM
David Noeth Vice President	KD8ACO 216-932-8005
Eric Jessen	N8AUC
Bob Winston Secretary	W2THU 216-771-3314
Dave Foran Treasurer	WB8APD 440-942-0618
Eric Jessen License Trustee	N8AUC 440-734-3146
TRUSTEES	
Jeff Kopcak	K8JTK k8jtk@arll.net
Raye Bayun	N8NAP 146.760/R
Gary Zimmet	WA8TJL 440-446-0402
Marv Grossman	W8AZO 440-248-0031
Jim Ozello	N8XDO 216-475-7218
Ron Jakubowski	K2RJ 440-498-1512
John Radney	KC8FOC 216-469-4361
Bryan Torok	N8OOF 440-871-5456
Mike Cegelski	K8EHP 216-252-6640
Jeff Garvas	N8YNR jeff@cia.net
TRUSTEES EMERITI	
Al Amster	W8TTY
Don Raith	N8DJG
Fred Collins	W8ADW(SK)
Pat Shreve	W8GRG (SK)
Al Severson	AB8P (SK)
POINTS OF CONTACT	
John Radney "Sunshine"	KC8FOC 216-469-4361
Ron Jakubowski Radio Officer	K2RJ 440-498-1512
Bryan Torok Radio Officer	N8OOF 440-871-5456
<p>The <i>Spirit of '76 & '88</i> is published monthly except in December. Contributions must be received by the 2nd Sunday of the month (except on months with 5 Sundays and Tuesdays, when the 3rd Sunday will suffice.)</p> <p>Editor: Ken Kane, KG8DN E-mail: editor@leara.org</p>	

The Prez Says

by Alex Manuk, WD8JMM

Well, friends, it's election time. Those of you with email addresses on file have received notice of electronic balloting, and the process is ongoing. The last day to vote electronically is October 22nd, so please, as they say in the political world: "Vote early, vote often!"



I'd like to say a few words about the trustees' election. Please don't take this as campaigning, even though my name is one of those on the ballot. What I'd like to point out is an oft-used quote in the business industry: "If you do what you always did, you'll get what you always got."

There are several highly qualified trustee candidates on the ballot this year. I beg you to study the biographical information on each candidate, think over the election process, then choose the five people you feel would be best suited to lead LEARA over the next three years. If you're pleased with the status quo, then by all means, cast your vote for the incumbents. If you're unhappy with the direction of the organization, or you just feel it's time for new blood, this is the time to "vote the bums out."

It's YOUR club, so please take an active role in determining how it will be run!

September's dinner meeting was a case of "best intentions" meeting "Murphy's Law." Bill Fraedrich, WB9LBI, had arranged for the Tri-County Traffic Training Net (say THAT three times fast) to hold their Tuesday evening session at 8 PM, so that he could demonstrate, live, the function of the National Traffic System (NTS). The TCTTN moved their customary frequency to the 76 repeater for the net, in the hopes that that would provide coverage for the meeting. However, the 76 machine is still at its temporary home in Newbury, so it took a couple of quickly-assembled cross band units in the parking lot (Thanks, Leone!) to get things up and running.

(Continued on page 3)

The Lake Erie Amateur Radio Assn., Inc., **LEARA**, is a not-for-profit [501(c)(3)] organization dedicated to Amateur Radio and 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 \$25.00. **LEARA's address** is: LEARA, PO Box 22823, Beachwood, OH 44122-0823.

LEARA is an **ARRL**-affiliated club. When you **join** or **renew** the **ARRL**, **LEARA** benefits monetarily if you so through the club. Send **ARRL** Applications/renewals to Club Treasurer Dave Foran WB8APD, 5439 Nan Linn Dr. Willoughby, OH 44094-4365. Make the check payable to **LEARA**, not the **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 p.m. The meeting begins at 7:30 p.m. 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** to leave a message.

Trustees' Meetings are on the second Saturday of odd numbered months at 9 a.m. 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.

(Continued from page 2)

Prez

After the last minute arrangements, we were treated to a very good demonstration of the way amateur radio handles messages. It was like having our own Western Union delivery person right there at the meeting! If you missed the demonstration and would like more information, please visit <http://www.tricountytraffic.net>.

By now you should also have received notice of our "Annual Meeting" in October. It is elections time, true, but there may be further business conducted (you never know) and although we don't have a scheduled speaker, I promise there'll be interesting conversation and perhaps a couple of quick presentations. See you there! **-AR-**

Status Update on the 146.76 Move

by Eric Jessen, N8AUC, License Trustee

A lot has happened since the last newsletter! And we're getting close to having .76 back on the air from its new home! In the meantime, .76 is on the air from a temporary home in Newbury.

On Saturday, September 18, a dedicated 220 V power line, and circuit breakers were installed to power the new repeater. Why do we need a 220 V supply line? Because the repeater power supply requires 220 VAC. Why does the repeater power supply require 220 VAC? Because the HP power supply that was donated to the project only works with 220 VAC.

The transmitter output is set at 175 Watts. It's capable of more than that, but we don't want to stress the final amplifier transistors unnecessarily. During power-failure mode, when operating on battery backup, the repeater will automatically cut its output power back to conserve



Tower Site Photos TNX to Bill, KC8AWR

battery power. But it won't have to run on battery for long, because the new site has a generator installed and everything in the shelter is powered from the generator when it is running.

On Saturday, September 25, the antennas were installed at approximately 150' above ground on the CECOMS tower in Highland Hills. .76 has two antennas supported by a single side arm that is bolted to the tower leg: The omni-directional VHF antenna (used for local receive and the 146.76 transmitter) is mounted on top of the sidearm pointing up. The omni-directional UHF receive antenna is mounted on the bottom of the sidearm pointing down. Each antenna is fed with 7/8" heliax, terminated by type N connectors. When the installation was completed, tests of the antenna showed no discernable reflected power.

During the weekend of October 9-10, the lightning arrestors were installed, and the necessary safety grounds were run. Cables were dressed inside the shelter, and made ready for the eventful day when .76 moves into its new home. A few adjustments still need to be made to the new controller. Then it will be time to do the final install. It is estimated that final install will happen in the next few weeks. Stay tuned for further details! **-AR-**



LEARA Rockets into the 21st Century

by Ron Jakubowski, K2RJ

This month, LEARA met two of its long-standing milestones that have been discussed at Trustees meetings on-and-off for several years. The first, **electronic voting**, was discussed initially over 2 years ago. Bylaws changes that would allow for non-postal voting were approved by the membership in February 2009. The second, **electronic payment of dues** has been on and off the docket for at least the last 4 years. In my mind, this became a much more important issue this year due to the electronic balloting since only 49 ballots (which also contained renewal notices) were mailed; 170 members are voting electronically and would not receive the renewal notices in the mail.

VOTING

Kelly Manuk, KC8UIX, YL of LEARA President Alex Manuk, WD8JMM, took the proverbial bull by the horns earlier this year and offered to take on this project. Kelly found a vendor, VotingPlace.net, that could handle our election needs at a very reasonable cost. The system was tested several times in late spring among the Trustees and some potential problems were uncovered. She was able to work these out with excellent support from Eric at VotingPlace, and this led to the general membership test election held last month. The test passed with flying colors. Since she is standing for election this year and didn't want any appearance of a conflict-of-interest, she passed the VotingPlace.net administrative reins to yours truly who took (and evidently passed!) a crash course on how VotingPlace.net works. Marv Grossman, W8AZO, provided the file of e-mail addresses that needed to be uploaded to the site (as well as all of the renewal notices and envelopes that were needed for the paper ballots!) Dave Foran, WB8APD, built the Leara-Voting e-mail list using the same file so we could send the Annual Meeting Notice and election instructions by e-mail to those who were eligible to vote electronically.

The electronic voting runs from Thursday, October 7th through Friday, October 22nd. This will give us the weekend plus 2 business days to tally the electronic votes (which should be very easy and automatic) and get a list of those who voted (but not how they voted!) from Eric at VotingPlace.net so that we can appropriately handle any voter walk-in's at the Tuesday election meeting. This is a manual process and this list is not available through the normal administrative interface. The electronic results tally will be kept "sealed" until the voting period officially ends at 7:30 p.m. the day of the meeting and the paper ballot totals will be added. Hopefully, this will reduce the ballot-count time.

DUES

Various Trustees and committees of Trustees have been looking at the use of PayPal for the payment of dues as well as other potential fund raising activities for at least the past 4 years. There were various reasons the process stalled, but one was how to handle the expense associated with using the service. After placing 49 paper ballots/renewal forms in the mail and sending 170 e-mail invitations to vote electronically, it hit me like a ton of bricks – how are we going to facilitate the renewals of those voting electronically. Since one of the main reasons for electronic voting was to cut down on ever-increasing postage costs, we certainly didn't want to snail-mail these renewals! There is work being done to enable us to do an "e-mail merge" from the club database to members, but, without some way of online payment, this would still require a check, envelope and stamp or a personal visit to a club meeting.

I decided to investigate PayPal myself. I found that to set it up for a "single payment", the charge would be slightly over \$1 per transaction. When you consider the cost of postage (\$0.44), paper, envelopes, etc. on LEARA's side, (not to mention the renewals that are never returned) the cost begins to approach a dollar. Add in the member's cost for the same, and it becomes a no-brainer. Add in the fact that if it facilitated only 4 additional renewals it would more than break even financially, I saw no reason not to do it. Our Treasurer, WB8APD set up the account and had me set up the payment screen and "Button" that would be placed on the LEARA website. I tested the system (paid my own dues with a credit card!) and determined the system was "ready for prime time." Jeffrey Kopack, K8JTK, our Webmaster, placed the button and instructions on the website and away we went. Pressing that button (after including your name, Callsign and e-mail address in the spaces provided, please!) takes you to the LEARA payment page where you will have the opportunity to sign into your own PayPal account to pay the dues or else just use a Mastercard, Visa, American Express or Discover card. Our account receives the dues payment and Dave receives an e-mail with the information that was provided. It doesn't get much better than that!

-AR-



The "Spirit" torch passes as K2RJ gets ready to head south. TNX, RON, for over three years of great Newsletters!



Upcoming Hamfests:

10/24/2010

[25th Annual USECA Swap](#)

Location: Sterling Heights, MI

Type: ARRL Hamfest

Sponsor: Utica Shelby Emergency Com. Assn.

Website: <http://www.USECAARC.com>

[Learn More](#)

10/31/2010

[Massillon Amateur Radio Club](#)

Location: Massillon, OH

Type: ARRL Hamfest

Sponsor: Massillon Amateur Radio Club

Website: <http://www.marcradio.org>

[Learn More](#)

11/07/2010

[Washington Amateur Communications](#)

Location: Washington, PA

Type: ARRL Hamfest

Sponsor: Washington Amateur Communications

Website: <http://www.wacomarc.org>

[Learn More](#)

Volunteer Exam Dates and Locations

(from the ARRL website)

10/30/2010

[Bentleyville OH 44022-3337](#)

Sponsor: WRECS

Location: Bentleyville Village Hall

Time: 9:00 AM (Walk-ins allowed)

[Learn More](#)

10/31/2010

[Massillon OH 44647-7960](#)

Sponsor: Massillon Hamfest

Location: Massillon Boys & Girls Club

Time: 9:00 AM (Walk-ins allowed)

[Learn More](#)

11/14/2010

[Independence OH 44131-4841](#)

Sponsor: Cuyahoga ARS

Location: Town Hall

Time: 9:00 AM (Walk-ins allowed)

[Learn More](#)

11/16/2010

[Sandusky OH 44870-1926](#)

Sponsor: Sandusky Radio Exp League Inc

Location: Sandusky Radio Exp League Inc

Time: 7:00 PM (No walk-ins)

[Learn More](#)

11/21/2010

[Elyria OH 44035-1343](#)

Sponsor: Lorain County ARA Red Cross

Location: American Red Cross

Time: 1:00 PM (Walk-ins allowed)

[Learn More](#)

11/28/2010

[Newton Falls OH 44444-1639](#)

Sponsor: Warren ARA

Location: Newton Falls Community Center

Time: 6:30 PM (Walk-ins allowed)

[Learn More](#)

LEARA "On The Air"

Club Net Information by David Noeth, KD8ACO

Reminder: The Skywarn Wednesday Evening Practice Net continues through October 27, 2010. Member participation in each and every net is greatly appreciated.

Wanted: Net Control Stations for the SSTV Net are needed, in order to resume this net. Please get in contact with me at kd8aco@leara.org, if you are interested in putting the LEARA Saturday SSTV Net "On The Air" again this fall.

Wednesday Skywarn Practice Net

Skywarn practice nets have returned on the 146.760 (-offset, 110.9 PL) repeater and will continue on Wednesday nights at 8:00 PM local time until the last week in October. Everyone is welcome! The 146.880 (- offset, 110.9 PL) repeater is used as a backup. Skywarn nets may be activated on one of these repeaters anytime threatening weather is approaching.

Thursday Club Net

The Lake Erie Amateur Radio Association's weekly club net is held every Thursday evening at 8:00 PM local time on the 146.880 (- offset, 110.9 PL) repeater. This is an open and informal net intended to provide the opportunity to test radio equipment, promote fellowship among local amateur radio operators, and develop radio traffic handling skills. You do not have to be a member of LEARA to participate.

Since the club net is a practice and informal net, LEARA would like to recognize those who take the time to check in and keep the net active and alive. During the past month, the weekly Thursday Night Club Net had a total of ninety-three (93) check-ins from forty-nine (49) different stations. The following were reported by our net control stations to have participated:

Bill AC8CO, David AD8WS, Arp K8ARP, Mike K8EHP, Jeff K8JTK, Steve K8SAS, John KA8GZA, Lilly KB8MHZ, Jeff KB8PIH, Sandy KB8UOC, Leone KB8VBR, Steve KB8VGX, Carl KB8VXE, Ray KC8FMG, Mark KC8FQV, Jeannie KC8MNW, Neil KC8OMO, Mark KC8SIE, Jeanne KC8TJH, Eddie KD8FTS, Keith KD8KBL, Laura KD8MBJ, Emerson KD8MMD, John KD8MUF, George KD8NBZ, Leon KD8NVX, Mark KD8OLG, Steve KD8OLH, Mark KD8OLI, Phil KD8OOQ, John KD8OVP, Ken KG8DN, Mike KG8MTG, Don KJ5KB, Eric N8AUC, Raye N8NAP, Bob N8ORC, Tom N8UAZ, Bill N8UPZ, Bob W2THU, Paul W3FIS, Clyde W8CGB, Matt W8DEC, Matt W8EBB, Nick W8NVC, Ray W8SLZ, John WA8LGM, Gary WA8TJL, and George WD8GEO.

Net Control Stations: Bob W2THU, Ken KG8DN, Bill AC8CO, Eric N8AUC, and Matt W8DEC.

Upcoming NCS assignments are:

10/21/10	Bill	AC8CO
10/28/10	Matt	W8DEC
11/4/10	Eric	N8AUC
11/11/10	David	KD8ACO
11/18/10	Bob	W2THU

The feedback received from members regarding the Thursday Club Net promotion has been very encouraging. This promotion encourages participation in both the weekly club net, as well as, the monthly LEARA membership meetings. Specifically, any individual who checks into the Thursday Club Net during a given month will be given one extra door prize ticket at the following month's LEARA club meeting. This extra door prize ticket will be given in addition to any other door prize tickets the individual has already been given. Participation in only one net during the preceding month is required. Participation in the monthly meeting is obviously required.

Saturday SSTV Net

The Lake Erie Amateur Radio Association's weekly slow scan TV net is held every Saturday evening from October through May at 8:00 PM local time on the 146.880 (- offset, 110.9 PL) repeater. Net Control Stations for the SSTV Net are needed, in order to resume this net this year.

Wanted! Net Control Stations

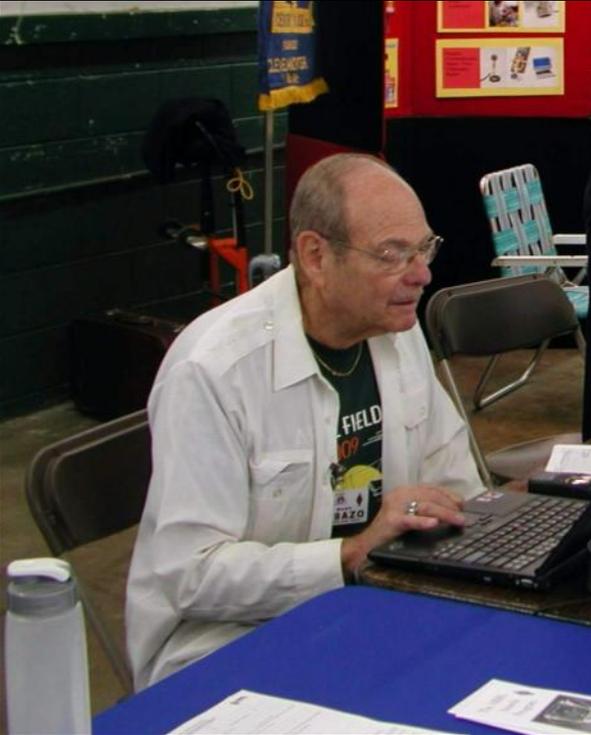
We now have six Net Control Stations for the Thursday evening LEARA Club Net. There's always room for more stations who would like to give it a try.

Any member of the Lake Erie Amateur Radio Association can be a net control operator for one or all of the nets held on one of the club's repeaters. Never tried it you say? No problem. Now would be a really good time to start. It's as easy as getting in touch with me and we'll schedule you into the rotation. If you should have any questions or requests for assistance to get started, just contact me at one of our club meetings or by using any of my contact information in the membership directory or send me an email at kd8aco@leara.org. Hope to talk with you "on the air" soon! **-AR-**

Grins at the
**Cleveland Hamfest
 and
 Computer Show**
 Cuyahoga County
 Fairgrounds
 Berea, OH
 September 26, 2010



Photos TNX to Bob, K8DTS



River Run Tradition Continues

“Just Perfect for Running”

by Eric Jessen, N8AUC

Usually, just after Labor Day each year, a group of hams gathers in the pre-dawn gloom in an empty, darkened parking lot somewhere in suburbia. HT's at the ready, batteries fully charged, they huddle around the trunk of a parked car collecting t-shirts, maps and course assignments. This is how the annual **River Run** begins for a group of LEARA members each year.

And on Sunday, September 12th, a group of 14 members of LEARA and Cuyahoga County ARES proudly carried on the tradition, by gathering in the K-Mart parking lot at Bagley and Engle Roads in Middleburg Heights just before sunrise for the 2010 version of River Run.

River Run is a half marathon that runs through the scenic Rocky River Reservation of the Cleveland Metroparks beginning at Wallace Lake in Berea and ending 13.1 miles later near the Memorial Ball Fields in Rocky River, just south of the intersection of Hilliard and Wooster Roads, near the old Rock-cliff Spring.

This year saw a repeat of the **Kamikaze 5K** run. Why call it that? Well, the walkers started shortly after 7AM, and the half marathon runners started northbound at 8AM. But the Kamikaze 5K runners started from the finish line headed southbound at 8AM, straight into the path of the oncoming half marathon runners! Fortunately, most of the 5K

runners and walkers were done before the half marathon runners got that far north! Mike K8EHP and Mary KC8YLC kept everything straight for us at the 5K turnaround point.

LEARA member **Ed Zorn KE8ZZ** staffed the starting line and called out the beginning of the race as usual. It just wouldn't be River Run without Ed at the starting line! Tom Kimball, KA8BZB did his usual fine job finding and following "tail-end Charlie" to make sure they finished safely. Jim N8XDO kept folks from getting lost near the non-metropark loop. Dave WB8APD kept everybody going in the right direction at the Barrett Road split. Everybody else kept a close eye on the rest of the course and the runners from the water stops located roughly every 2 miles along the route.

The weather was just perfect, which is becoming a tradition for River Run: “Just perfect for running!” And again, this year's race was entirely uneventful, as no participants required any physical assistance. Tom escorted "tail-end Charlie" across the finish line about 11:15 AM.

After the event, some of the crew gathered near the finish line for a post-race snack, courtesy of Hermes Sports. Pizza Pan provided the pizza, which is the breakfast of champions and many undergrad college students! To go along with the pizza, there were bagels, fruit, coffee and bottled water.

A sincere thanks, and a hearty "well done" are in order for the following hams, who made up this year's River Run Radio Team:

**Ed - KE8ZZ, Tom - KA8BZB,
Karl - KB8VXE, Arp - K8ARP,
Gary - AF8A, Jim - N8XDO,
David - AD8WS, Laura - KD8MBJ,
Eddie - KD8FTS, Mike - K8EHP,
Mary - KC8YLC, Tom - AC8EH,
Dave - WB8APD, and Eric - N8AUC.**

Also a special thank you to the NASA-Glenn ARC for the use of their 2M repeater, which covers the depths of the Rocky River Metropark valley like a well-made glove!

-AR-



WB9LBI and his RF Team

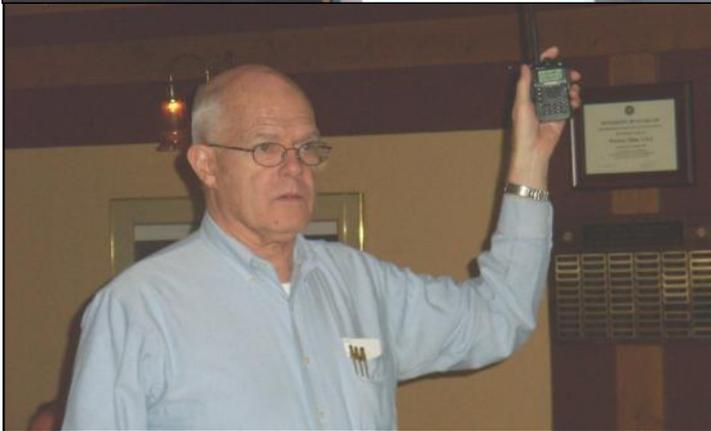
Fight the Faraday Cage — and Win!

LEARA's Monthly Meeting September 28, 2010



LIVE: Tri-Country Traffic Training Net

- Tonite's frequency: 146.76.
- Alt input: 445.200 (cross bar)
- Net Control: Dennis KI8U
- To check in tonight, use "Stations with or without"
- Check in this way "in Parma, no trans"



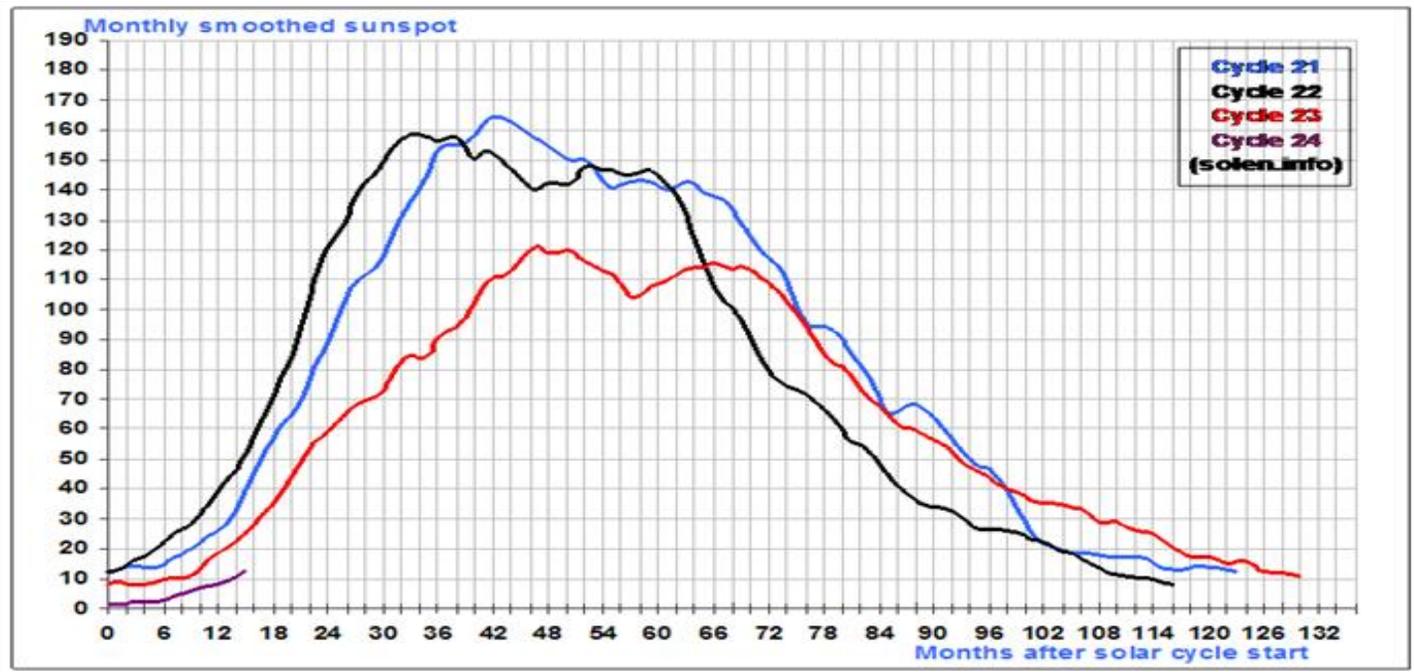
With contributions by Leone, KB8VBR, Dennis, KI8U, and those who signed in to the Tri-County Traffic and Training Net, **Bill Fraedrich, WB9LBI**, successfully fought his way out of an "RF Pit" to engage LEARA members, many armed with their own HTs, during his presentation on September 28th. Starting with Hiram Percy Maxim, Bill deftly traced the rich ham radio history involved in relaying messages, and demonstrated (with screen displays and live audio contacts) the protocols for passing messages on an amateur radio traffic net. TNX, Bill!

-AR-

Sunspot Cycle 24 Is Late - Looks Wimpy Too!

From ARRL.org and K7RA

Solar cycle 24 has initially displayed much less activity than recent cycles. Based on statistical models the monthly smoothed sunspot number is likely to peak only between 50 & 70 in 2013. The comparison with recent cycles is interesting to track the development of cycle 24. The X axis in the chart is the number of months since the cycle started, while the Y axis is the monthly smoothed sunspot number. See graph below, comparing the start of cycle 24 (purple line at the lower left) with the past sunspot activity during cycles 21, 22, and 23:



LEARA — The Lake Erie Amateur Radio Association

- 41 Years of Serving Greater Cleveland Since 1969 -

VOICE REPEATERS:

- | | |
|----------------|---|
| 146.76/R- | • Newbury (<i>Temporary QTH</i>) (Requires 110.9 Hz tone) |
| 146.88/R- IRLP | • Lakewood (Requires 110.9 Hz tone) IRLP Node 4282 |
| 224.90/R- | • Lakewood (141.3 Hz tone) |
| 444.70/R+ | • Lakewood (131.8 Hz tone) |

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.

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.
Those who subscribe via e-mail will not receive a paper copy.