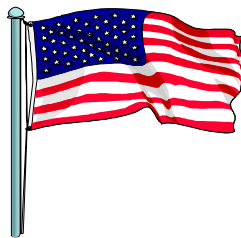


10 METER ROUNDTABLE
WEDNESDAY NIGHT @ 2030 HRS
28.450 MHZ.



LCARA TWO METER NET
THURSDAY EVENING @ 1900 HRS.

LCARA WEB SITE
www.lcara.org



The LCARA Patch

Volume 40, Issue 9

AUGUST 2018

The PATCH

Published by the Lake County Amateur Radio Association
P O Box 868
Painesville, OH 44077-0868

The Patch Staff

Editor: Bob Mekinda K8QXO (Temp)

LCARA Officers

Ed Kopcak	KB8BKE	President
Larry Caskey	K8LPC	Vice-President
Rick White	W8QL	Secretary
Ed Kopcak	KB8BKE	Treasurer
Joe Koskovics	N8JKO	Director at Large

STANDING COMMITTEES

ARES/Public Service	Mike Goffos	WB8ZGH
Contest	Reno Tonsi	WT8C
DX	Jim Pyle	AA8OY
Field Day Chairperson	Jim Pyle	AA8OY
Program Director	Joe Koskovics	N8JKO
Historical Society	Bob Mekinda	K8QXO
History	Scott Farnham	KO8O
Publicity	Vance Roth	KA8YHZ
Communications	N8IJG, K8LPC, & W9LAC	
Sunshine	Connie Tonsi	KB8ZZW
Trustee, N8BC	Bob Liddy	K8BL
Web Master LCARA	Bill Wihebrink	N8IJG



September's meeting is at the Lake County Historical Society

415 Riverside Drive
Painesville Township, Ohio 44077
<http://lakehistorycenter.org/>

Meeting @ 7:30 pm on September 5th

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MINUTES FROM JULY 4th MEETING

***THERE WAS NO MEETING HELD DUE TO THE 4TH OF JULY HOLIDAY AND THE
PUBLIC SERVICE EVENT FOR THE MARDI GRAS PARADE AT FAIRPORT HARBOR***



MINUTES FROM AUGUST 1ST MEETING

Board Members Present:

- KB8BKE – Ed - President
- K8LPC – Larry - Vice President
- W8QL – Rick - Secretary
- N8JKO –Joe - Director at Large

Meeting Minutes:

- **Ed – KB8BKE** called the meeting to order at 7:33 PM with the Pledge of Allegiance and a round of introductions. There were a total of 16 members attending.
- **Patch:** There were no corrections. Ed – KB8BKE asked for anyone that would want to take over production of the Patch from K8QXO - Bob Mekinda (interim editor) and resume the duties of the Patch editor or at least help. No takers for this position at this time.
- **Ed – KB8BKE** noted there was a little correspondence with the annual mailing from LEARA.
- **Jim – AA8OY** noted there were many DX opportunities with Wake Island, New Guinea, Galapagos Islands, Tonga, Azores, South Cook Islands, Albania, and Mauritius.
- **Jim – AA8OY** discussed the 2018 Field Day operation and noted that we had a much lower score this year than last. Conditions were absolutely horrible. Maybe the worst. We achieved (unaudited) a score of around 8,000 points. Jim also noted that for the Civil War Re-enactment activities, the 20 and 40 meter bands were terrible with very few contacts. The Civil War Roundtable would like to have a telegraphy demonstration on communication during Civil War Battles.
- **Mike – WB8ZGH** noted that for Public Service there was the Perry Nuclear Power Plant Drill for test purposes on August 15, 2018. The actual drill will be on September 19, 2018. Hams interested in becoming ARES members are encouraged to sign up/join by visiting the website and logging in.
- **Joe – N8JKO** noted that the scouting activities at the LCHS are looking for an ongoing opportunity to help scouts get their radio merit badge. He then discussed the ability about getting certified instructors to administer the merit badge process. This could or may include off site training for the merit badge instructor(s). This would give the scouts opportunities to not only get the merit badge, but get a ham radio operators license and perform meaningful public service.
- **Bill – N8IJG** then gave a presentation on navigating the new LCARA website front page. This was an excellent presentation and is the culmination of hard work and creativity by Bill, with assistance from Ed – KB8BKE. This looks like a world class website.
- **Sunshine committee** reported that Kathy McAdams – AB8GV had surgery, was at home, and recovering. Reno – WT8C will be undergoing some surgery also.
- **Ed – KB8BKE** requested New Business. There was none.
- **Joe – N8JKO** noted that the picnic was going to be on August 26, 2018, at the Lake Erie Bluffs Pavilion, starting at 12:00 noon for club set-up with lunch to start around 1:00 PM. We have the pavilion until 6:00 PM. This is another great LCARA social event, free to our members and their

families. To get to the Bluffs (and Pavilion), use the Lane Road GPS address. He also commented that as many people as possible should visit and use the LCARA Facebook page.

- It was noted that the W8OKE - 147.015 repeater will be down for about 2 and ½ days for tower maintenance on August 13-14, 2018.

Meeting adjourned 8:35 PM
Rick – W8QL



AUGUST ATTENDANCE

Ed, KB8BKE, Larry, K8LPC, Joe, N8JKO, Rick, W8QL, Mike, WB8ZGH, Bill, W8BBC, Bill, N8IJG, Sally, N1BCF, Peter, W1BKZ, Neal, NF1X, Larry, KB8PHI, Vance, KA8YHZ, Ron, NU8H, Jim, AA8OY, Tom, N8UAZ, Evan, W8LSQ, Cal, W8BZP.

INTRODUCING the new PATCH EDITOR

I am pleased to have the honor to introduce the new PATCH Editor and I would hope that all the members would do all they can to assist her in this new endeavor. The new Editor is Melody Leasko, KB8QIB, and she will take the over with the October issue. Thank you Melody.

Final Thoughts from the Retiring Editor

I took over as the Editor of the PATCH last July on a temporary basis until we could get a new Editor, fortunately it is a year later and someone has come forward to take over the job. I will prepare the September PATCH and assist the new Editor in October and as long as required. I would like to note that I have served as an Officer of the club for 7 years and as Editor of the PATCH for 6 years and then this latest year with the newsletter. The newsletter needs fresh eyes and ideas. I am happy to continue as liaison with the Historical Center as long as the Board wishes but the club needs fresh ideas.

Based on the above, I would note that the current officers have been serving for 4 and 5 years and for the last 4 we have only had four officers when there should be five. The board needs five officers and I believe we need some fresh faces to step up and run for office this year. Some of the current officers may wish to continue and that is great, but it would be nice if there was a choice.

The same situation is occurring with Field Day, Jim, AA8OY has continued to run it for more years than I know and it would be nice if someone would offer to assist or take it over and give him a break before he advises us that he is done. It would be an asset to have his assistance for anyone wanting to transition into the job. Additionally we now have the Field Day Dinner Captain Don WA8TWM stepping down after 16 years of doing an outstanding job with his wife and the able assistance of Reno WT8C in preparing and serving a grand dinner. He is willing to assist the person taking the job in

2019. Who is going to step up to take on these positions? **Please** everyone think about this before we have NO one willing to be an officer or chairmen of committees, if this were to occur it would only lead to the demise of a great club.

Tnx. & '73

Bob, K8QXO

From the Corner Office of the VICE PRESIDENT, LARRY K8LPC

Greetings Everyone ☺

September is here, and with it come some cooler temperatures to offset the hot and humid days of August.

August was a busy month with several local Hamfests, but our highlight was definitely our club picnic. It was our first picnic at Lake Erie Bluffs and it was a blast. The WX was perfect and 30 + members enjoyed a fine day, great food and friendship. The hungry crowd kept yours truly busy at the grill serving up burgers, brats and hotdogs. Many many side dishes were brought in by our members and were devoured by the crowd. Personally, I've received many complements on the event, so let me in turn give thanks to the Board members and others who helped to make it a wonderful afternoon. Please let us know if you think that we should return there next year, share your comments with us. We wish to make this a memorable experience for all to enjoy.

In August we had only one Public Service event, which was the Perry Power Plant Simulated Emergency Dry Run, the graded drill will be held later this month.

September will be a busy month, on the 8th we will participate in Ohio State Parks on the Air. We will have our communications trailer at Mentor Headlands State Park, and we encourage you to come and operate the station or possibly set up a station of your own, there's plenty of room there to set up and operate. On the 15th we will have our communications trailer in Willoughby Hills for their "Touch a Truck" event. On the 22nd we will be set up with our trailer to operate at the Garfield Home for National Public Lands Day. Take a look at your calendar and see if you can stop by and work any of these events. Please see Mike WB8ZGH or any of the Board members to get more information on any of these.

Our weekly nets continue, on Monday, we have the Lake County ARES Net at 7PM, on Thursday we have the LCARA Weekly Net also at 7PM. These Nets are on our 147.21 repeater which requires a PI tone of 110.9. On Wednesday we have our 10 meter roundtable on 28.450 at 8:30 PM. Please take some time to visit us on any or all of our Nets, we will be glad to have you.

Our next VE testing session will be on Saturday October 6th at 12 noon at the Kirtland Library. We do entry level testing and also upgrades. Please arrive a little early so you can fill out the required paperwork before the exam begins.

The next LCARA Board meeting will be at the Tri-Point Facility on Wednesday September 12th in the Board room at 7PM.

Our next breakfast gathering will be on Tuesday September 18th at the Perkins in Painesville. Come join us about 8 AM for good food and fellowship.

We are always looking for Guest speakers or ideas for presentations. Please contact Joe N8JKO or myself if you have any ideas.

I'm looking forward to seeing everyone at the Lake County Historical Society on Wednesday September 5th at 7:30 PM, bring a friend ☺

73 de Larry Caskey K8LPC

LCARA Vice President

K8LPC@ARRL.NET



AUGUST Backscatter 2018

265 Years Ago: Do not try this at home. Professor Georg Richmann was killed by his experiment with lightning. One year after Benjamin Franklin's kite experiment, Richmann, in Moscow, attached a wire to the top of his house and led it down to an iron bar suspended above an "electric needle" and a bowl of water partly filled with iron filings. During a storm, Richmann was struck while about a foot from the bar. A globe of blue and whitish fire about four inches in diameter struck Richmann's forehead with "an explosion like that of a small cannon." His assistant, M. Sokolaw, who survived, was thrown to the floor. He later found marks of burning hot wire fragments on the back of his clothes.

58 Years Ago: Echo 1, the first communication Satellite is launched. A 100 foot metalized Mylar balloon, it was a passive reflector, not a transceiver. It remained in orbit for nearly eight years.

40 Years Ago: LCARA provides communications for the News Herald's Johnnycake Jog. No emergencies are encountered, other than a riderless horse joining the runners, then falling. Horse survives.

35 Years Ago: The LCARA "Ham-O-Gram" is renamed "The Patch". Editor Gary, KC8GN is elated.

The combined Field Day effort of LCARA and LGARC nets a record 12738 points, more than both clubs did the prior year combined. This is despite a now traditional problem of the generator running out of gas at 1 AM.

Years ahead of its time, the FCC runs out of paper for issuing licenses. It temporarily allows operation of new and upgraded hams with only telephone approval.

30 Years Ago: LCARA gets the boot! The Union Federal S&L, where the club has met for a decade, converts its 2nd floor meeting room into offices. We move to the basement of the Lake County Administration Building on short notice.

Field Day tower falls! While erecting the 20 meter phone tower, the base levitates, resulting in an unplanned impact with the ground, and a bent tribander. Fortunately, no hams are bent.

25 Years Ago: The ARRL DXCC desk catches up. K8BL reports 30 day response time on a packet of QSL endorsements.

20 Years Ago: The FCC proposes elimination of Novice, Technician, General, Advanced and Extra classes. They are to be replaced with Class D, C, B, & A, with the entry level Class D being equivalent to the current Technician class. There will be no replacement for the current Novice class. The highest class, Class A, will require 12 wpm code.

The Madison input no longer exists. The property that held the site has been sold.

15 Years Ago: Jim, AA8OY reports that despite a MUF of 7 MHz, the Field Day effort managed 3205 QSOs, including 1714 on CW. The total raw score was 11,138 points.

A real Field Day? Electricity goes out for up to four days in the northeastern US, and the Great Lakes region of Canada.

10 Years Ago: The program at the August meeting is "Hot Air Ballooning, GPS controlled Airplane transmitting "APRS" by Dan Greathouse, N8NBC.

5 Years Ago: The Patch asks "what is Yuri Gagarin, amateur callsign UA1LO, famous for?" with one of the multiple choice answers being "he is the back-up singer for the band U-2".

President Bob, K8QXO states "I truly believe that no other club has a better Field Day and Field Day dinner than LCARA.

SEPTEMBER Backscatter 2018

136 Years Ago: Sept 4. The first central electric station to supply light and power is built by the Edison Electric Illuminating Company at 257 Pearl Street in New York City. The station's "Jumbo No.1" generator was a direct-current steam-powered dynamo, with the armature alone weighing 6 tons. Initially it could power about 700 sixteen candlepower lamps, and within 14 months served 508 subscribers and powered 12,732 bulbs.

117 Years Ago: VLF. Prof. R. A. Fessenden applied for a U.S. patent for "Improvements in apparatus for the wireless transmission of electromagnetic wave ... and reproduction of words or other audible signals." According to the U.S. Dept. of Commerce "It appears that in connection with this apparatus there was contemplated the use of an alternating current generator having a frequency of 50,000 per second.

73 Years Ago: The first "bug" in a computer program was discovered by Grace Hopper. A moth was removed with tweezers from a relay and taped into the log.

64 Years Ago: Sept 20 the first FORTRAN computer program was run. John Backus at IBM supervised the development of the programming language that would allow users to express their problems in commonly understood mathematical formulae. By 1958 the language was expanded to Fortran II, which included subroutines, functions and common blocks, and in 1962, Fortran IV.

60 Years Ago: Sept 12 Jack Kilby demonstrated a miniaturized electronic circuit to his supervisor at Texas Instruments, now recognized as the first integrated circuit.

40 Years Ago: The 81/21 repeater now has autopatch capability. Thanks to Ed, WB8ZGK and others, this state-of-the-art system allows members to phone from their cars.

The repeater's call changes from WD8DQW/R to WA8HAR/R. Dave, WD8DQW, takes a new job, and moves out of the area.

35 Years Ago: Motorola agrees to supply an HT for space shuttle flight STS-9 and astronaut Owen Garriott, W5LFL, will be the first ham in space.

Ken, N8EIH, and XYL Deena are the fox(s) for the club hunt, disguised as a young couple parked beside a bridge over Cascade Falls. Winner Mike, WD8IVL, explains his 1st place finish, saying he knew the area well from his high school days.

30 Years Ago: LCARA launches an information net meeting on .21, Thursday evenings at 9PM.

Times change, Bob, K8BL, encourages use of the repeater for DX spotting.

25 Years Ago: Bruce, N8LXS, announces the start of his new company, RF Applications, to design and manufacture amateur radio accessories. His first product is an auto ranging digital wattmeter.

Bob, K8BL makes Honor Roll.

20 Years Ago: The FCC releases NPRM 98-143 detailing its proposal for license restructuring.

15 Years Ago: Mike, WB8ZGH, reports on the August 14th blackout. 81/21 was up, powered by the hospital's emergency generator. Lake County ARES/RACES was on standby, and the EOC was partially activated. But with phones continuing to function, and the cellular system fine by 7 PM, everyone went home by 11 PM.

10 Years Ago: Now **THAT'S** DX. The program at the September club meeting will be Hal Braschwitz, W8PN talking about radio astronomy.

5 Years Ago: LCARA joins with the Lake County Historical Society and creates an amateur radio display and station at the Historical Society's museum.

Bob Liddy, K8BL discusses his introduction to amateur radio and his first receiver, a Hallicrafters S-107.

LCARA Historian

Scott KO8O



DX ALERT SEPTEMBER 2018

VATICAN, HV0. - HV0A operator IK0FVC, Francesco, notes that the Vatican is not a signatory to CEPT T/R 61-1 and thus operations by HV/R1AR are not valid.

SINT MARTIN, PJ7. - K5SL, Randy, is planning another trip here as PJ7/K5SL from September 8-15. Listen for him on CW and SSB on 40, 30, 20 and 17 meters.

TURKEY, TA. TC2F will be on the air August 29 to September 4. It is a youth team of TA7AZC and TA7AOF, both 20 years old.

TONGA, A3. Operator DL7JLL is QRV as A35JLL until September 19 from several islands in the Tongatapu Group, IOTA OC-014. Activity is on 40, 20, 15 and 10 meters using SSB.

MINAMI TORISHIMA, JD1. Take, JG8NQJ is QRV as JD1/JG8NQJ while delayed on Marcus Island, IOTA OC-073, and remains here until September.

CZECH REPUBLIC, OK. Special event station OL100CSR is QRV until October 31 to celebrate the founding of Czechoslovakia 100 years ago.

TURKEY, TA. Members of the 2018 Turkish Ankara Youth Contest Team will be QRV as TC2F until September 4. Activity will be on the HF bands.

Happy hunting!

Jim, AA8OY

Thanks to ARRL DX and Weekly DX



VE TESTING IN LAKE COUNTY

Exams are held every other month.



The Lake County Amateur Radio Association will be holding its **2018** Amateur Radio license exams at **the Kirtland Library**, 9267 Chillicothe Road, on the following dates:

Saturday, August 4

Saturday, October 6

Saturday, December 1



This bi-monthly schedule is the first Saturday of every even-numbered month (e.g., February being the second month, etc.), and will be held at the Kirtland Library, 1.7 miles south of I-90 on Route 306 (Chillicothe Rd). The library is on the left, just beyond the Marathon gas station. The tests will start at **12 noon**. Please arrive a few minutes earlier.

To register, you will need the NCVEC 605 Form, which will be available at the test. If you would like to complete one ahead of time, be sure it is the Sept 2017 version or later. You can find it at www.arrl.org/files/file/ncvec605-3.pdf

Be sure to bring **the original and a copy of both your license and any CSCEs you may have to the exam.** The cost is \$15.00, and if you wish to pay by check, it should be made out to the ARRL/VEC. Identification with your picture is also necessary, such as a driver's license. If you have any questions, please contact Scott Farnham, KO8O, at (440)256-0320, or scottfarnham@roadrunner.com



Breakfast Date for SEPTEMBER 2018



Mark your calendar the next meeting of the Tuesday Morning Breakfast Group is at the Painesville Perkins on **Tuesday, September 18th** at 8:00 a.m. Breakfast orders start being taken at 8:30 am. This group averages 15-20 people from all counties, and it provides a great opportunity to meet other Hams, sell and trade your spare equipment. This is not a club event. Please encourage any Hams or Non-Hams, to bring your significant other, or a friend, to breakfast. It is a fun

gathering.

LCARA BOARD MEETING

The September Board meeting will be at the Tri-Point facility on September 12th @ 7pm, in the Tri-Point Board room.

To find the Board room, simply continue walking past the regular meeting rooms down the hallway. The Board room is located on the left from the main elevators.

All members are invited

FOR SALE OR SWAP

EQUIPMENT FOR SALE: BY BILL, N8IJG (CALL) 440-943-1703

1. Heathkit DX-60A AM/CW Transmitter with HG-10 VFO, Asking \$150.00
2. MFJ 8268 Digital SWR/Wattmeter/Freq Readout, Asking \$140.00
3. Drake 2-B Receiver w/2-BQ Q Multiplier and Speaker, Asking \$350.00
4. Icom IC-756 Pro 3 Transceiver, Asking \$1300.00
5. Icom IC-820H 2/440 Base Dual Band Transceiver All Mode, Asking \$600.00
6. Icom IC-275H 2 meter All Mode Transceiver, Asking \$600.00
7. Swan 350C w/117XC PS, Asking \$300.00

Mike, KD8JDL is in the process of disposing of Radio Tubes from his Father's store. If members could E-mail him with requests and he has the tube, there will be no charge.

Equipment for Sale from the Estate of W8GZI: Contact Al Ballard @ alandballard@gmail.com

1. Kenwood TS440 Transceiver
2. Arbitron ASL 80B Amp
3. Miscellaneous items

Mark Your CALENDAR

<i>Event</i>	<i>Contact</i>	<i>Location</i>	<i>Date</i>
ARES	WB8ZGH mgoffos@ymail.com	147.210 MHz	MONDAYS 19:00
Two Meter Net	Bill N8IJG n8ijg@arrl.net	147.210 MHz	THURSDAYS 19:00
Ten Meter Roundtable	WB8ZGH mgoffos@ymail.com	28.450 MHz	WEDNESDAYS 20:30
OSPOTA	WB8ZGH mgoffos@ymail.com	Headlands State Park	9/08 12:00-18:00
LCARA Board Meeting	Tri Point Board Room	Tri-Point Medical	9/12 19:00
Breakfast	Lcara.org	Painesville Perkins	Tuesday 9/18 08:00
PNPP EXERCISE	All available Hams monitor 147.21 for check-in	Your Home/Car	9/18 09:00-????
VE TESTING	Scott, KO8O, AT 440-256-0320	Kirtland Library	10/6 12:00
<i>Event</i>	<i>Contact</i>	<i>Location</i>	<i>Date</i>

LCARA WEBSITE INFORMATION

I am happy to inform you that the LCARA Website has been redone and improved by Bill, N8IJG. Please check it out. There are a number of items still under construction.

LCARA NET INFORMATION

LAKE COUNTY ARES NET

The Net is Every Monday at 7:00pm on the 147.210 repeater. This net is open to all licensed operators; you do not need to be a member. This net is provided for operators to verify the proper operation of their equipment and verify their station's capabilities in the event of an emergency. Here is your perfect chance to be Net Control or Alternate Net Control. Step forward, no experience is necessary, everyone will help you.

LAKE COUNTY TWO METER NET

The 2 Meter Net runs weekly. Come join your fellow hams on Thursday's at 7:00 p.m. on 147.210 MHz.

This is an informal net where the group can discuss any subject for the good of the group, great time to ask those questions, especially from the new operators. List your items related to ham radio that you want to sell or swap and any sunshine announcements to pass on.

N8IJG brings us the ARRL News when available. Bill is always looking for Alternate Net Control Operators. Please check in.

TEN METER ROUNDTABLE

The 10 Meter Roundtable meets on Wednesday's at 8:30 p.m. on 28.450 MHz.

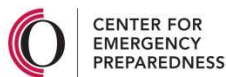
This is an informal roundtable where the group can chat about anything that comes to mind and even correct some of the world's problems.

You don't need to be a LCARA member, just have at least a Tech ticket and some 10 meter gear.

The Roundtable is a good chance to meet old and maybe some new friends. This is a "Round Table" anyone can start it off on 10 meters. Any questions contact WB8ZGH.



OHIO EMERGENCY PREPAREDNESS NETS, COLUMBUS EOC



Ohio Emergency Preparedness Net, w8SGT, is on every Tuesday at 7:15 pm. Try 3.902 MHz, tune up and down the band and check in! Follow on Twitter (hashtag W8SGT) for frequency information on the 80 meter band.

Ohio Digital Emergency Net is held on Tuesdays at 8:00pm (0100 UTC).

OHDEN meets on 3585 KHz +/- USB. <http://ohden.org/>

This net is looking for all Ohio Counties to check-in. Learn as you go.

Modes: OLIVIA 8/500/PSK31 alternate, with MT63 1K for bulletins.

Frequency: 3585 KHz, 7072 KHz alternate.

MT63 2K on VHF/UHF with PSK as an alternate (Assigned locally)

THE AMATEURS'S CODE

By Paul M. Segal, W9EEA (1928)

The Radio Amateur is:

CONSIDERATE..... never knowingly operating in such a way as to lessen the pleasure of others.

LOYAL..... offering loyalty, encouragement and support to other amateurs, local clubs and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE..... with knowledge abreast of science, a well built and efficient station, and operation beyond reproach.

FRIENDLY..... with slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED..... Radio is an avocation, never interfering with duties owed to family, job, school or community.

PATRIOTIC..... with station and skill always ready for service to country and community.

LCARA was organized for the purpose of furthering Amateur Radio by increasing the technical knowledge and operating proficiency of radio amateurs through continuing education, public service and acting as a vehicle of communication by, between and with the members of the association. LCARA is an incorporated association chartered under the laws of the State of Ohio and is an exempt organization under section 501 (C) (3) of the Internal Revenue Code. Contributions to LCARA are fully deductible from Federal Income Tax. Regular and Senior Dues are \$20.00 per year, Students \$10.00. Items may be reprinted by other non-profit publications without prior permission providing credit is given to the original source and The LCARA Patch. Articles from members are welcome.

Voice Repeaters N8BC

147.210 with a .600 MHz+ offset PL tone of 110.9 Hz.

224.500 with a 1.6MHz.-offset, PL tone of 141.3 Hz.

444.650 With a 5.0MHz. +offset, PL tone of 131.8 Hz.

(Repeater & N8BC trustee, Bob Liddy, K8BL)



Web site: www.lcara.org

To receive the Patch via email in PDF format Send an e-mail to lcara_patch-subscribe@yahoogroups.com

THE LAKE COUNTY AMATEUR RADIO ASSOCIATION