

THE TUNED CIRCUIT

Club Website: <http://www.n8lc.org>

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**December TC
Deadline:
Monday
November 23rd**

Next Meeting - 7:00 PM

November 4th 2020 at the Tucker Senior Center (see last page for map and address).

Meeting Program - The program for our meeting will be as reported on [page 5!](#)

The NEXT board meeting might be on Wednesday, November 11th, 2020 at the QTH of Scott, W8CQD. Inside or outside will depend on the weather.

THE PREZ SEZ

We are planning to have an in-person meeting in November! The Tucker Senior Center has us on the calendar for this month and the current restrictions should permit us to meet.

A couple of things to keep in mind: masks and six feet of separation will be required and as a result of the mask requirement we will not have refreshments at the meeting.

Aside from refreshments (or lack of), the rest of the meeting should be occurring as normal.

This includes a program! Our own Dave, N6WY, will be presenting a talk about his paper that was published in the [2020 ARRL/TAPR Digital Communications Conference](#) proceedings. The title of his talk and paper is "Forward Error Correction and Pictures from Mars".

The following is the abstract for his paper and talk:

This paper illustrates how a sender can encode binary data words so that the data words can be sent over a weak noisy communication channel and a receiver can detect the correct data words. No abstract mathematical equations are used; just two numerical examples. The first example is a simple example. The second example is the encoding method used on Mariner 9 spacecraft to transmit pictures of the Martian surface as it orbited Mars. The Hadamard linear block code is used for both examples.

As is also normal for November, we will open nominations for all board positions. This does not mean that all the current board members aren't returning, though there will be two positions that will need a new volunteer. Those are the positions of President Elect and Activities Manager.

In December we will have the opportunity for any final nominations before we hold our annual elections.

I am hoping you and your families are all doing well, please get your flu shots, and stay healthy!

73!

Scott/W8CQD

Report of the Secretary

by Marty / K8HVI

Meeting Call to Order:

The LCARC Treasurer (Gregg Crump/N8GEO) called the October 7th, 2020 LCARC general membership meeting to order at 7:02PM on the club's 2 meter repeater (and EchoLink) due to not being able to host the meeting at our normal location because of the COVID-19 restrictions.

Roll Call was taken and we had 11 members (N8GEO, K8HVI, WU8C, N8FYL, N8HAR, KB8QYJ, AC8ER, N5WCS, K8RO, N8AT, N8PYN), and 3 guests. (KE4ZYQ, WB8ITB, VE3SUB)

Treasurer's Report: by Gregg/N8GEO:

Total amount in the account is	\$6375.01
The Youth Fund has	\$327.00
The Repeater Fund has	\$161.54
Total available is	\$5886.47

Where's Doug: by Doug/N8PYN:

Nothing to report. Doug did go to the repeater site and set-up all the packet station equipment. Just pending K8HVI installing a network switch so he can get internet access.

Membership and Tuned Circuit Report: by John/N8FYL:

69 members (includes 9 Life members)

The November *Tuned Circuit* deadline is October 26th, 2020.

Net Points: by Dale/K8RO: No Net Points this month. Dale did report receiving 142 Field Day QSLs.

Old Business:

Repeater work update; by Gregg/N8GEO

Gregg and Mark/N8REZ plan to complete the roof re-coating work within a week or 2. Will need about 5 to 10 gallons of roof coating for the project.

New Business: None

Miscellaneous items:

Gregg/N8GEO read the thank you letter we received for the \$50.00 donation to [Radio Club of America Youth Activities Program](#) (Dayton Youth Forum) in honor of our recent silent key, Wayne, WG8U.

Gregg/N8GEO said we will be able to have a meeting next month at our normal meeting location, the Tucker Senior Center. Some discussion was had about whether we should have food and drink due to Covid. It was concluded that we won't be doing food or drinks.

Discussion was had about possibly using PayPal for people to pay dues. Gregg said he would look into making a process to run these types of payments through his email.

Since we have no swap this December, it was brought up that we could host a trunk swap. Much discussion was had. No one raised their hand to head up this idea. Gregg stated he would check if our insurance would cover such an event.

There will not be an LCARC Christmas Party this year. Also, monthly club dinner night is postponed for the near future.

Gregg/N8GEO closed the meeting at 8:00pm.

NOVEMBER 4TH MEETING PROGRAM

Our own Dave, N6WY, will be presenting a talk about his paper that was published in the [2020 ARRL/TAPR Digital Communications Conference](#) proceedings. The title of his talk and paper is "Forward Error Correction and Pictures from Mars". See the paper's abstract in the [Prez Sez on page 1](#)



Meeting time is 7:00 PM



Membership Report

The pre-filled L'Anse Creuse membership renewal form that was emailed in September has been used by 29 members for their 2020-2021 renewal. Gregg/N8GEO has been using the Microsoft Lens app on his smart phone to capture an image of the forms he receives and then he emails them to me. 8 current members and 1 new member have hand filled their form found in every *Tuned Circuit*.

As of today, 37 renewals have been received, and we have 1 new member, Pat/K8PLY.

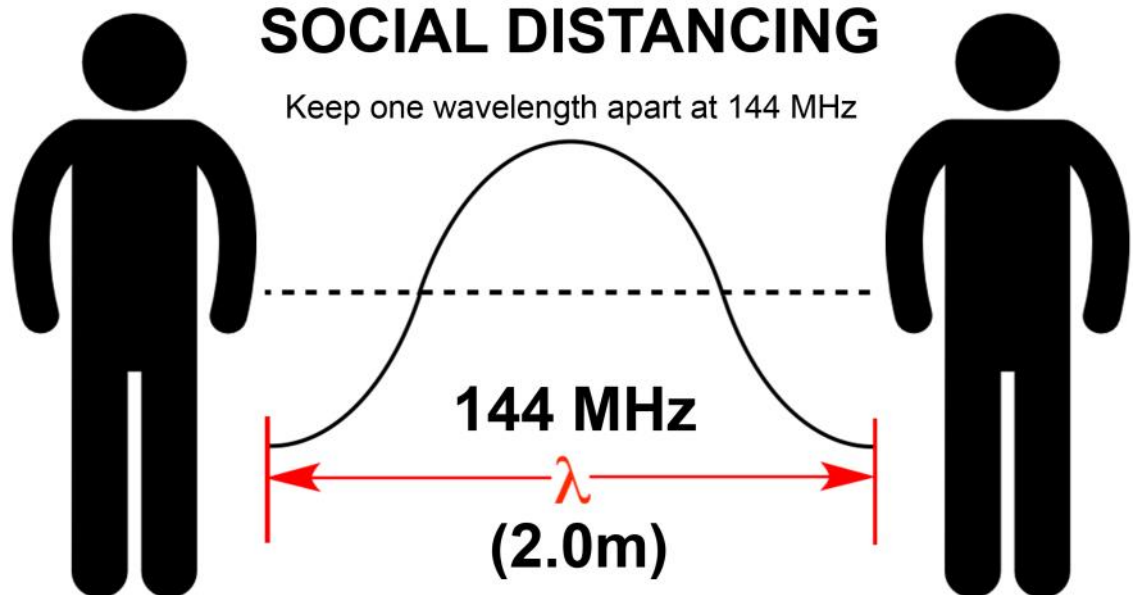
We are at 70 members. 9 are life members, and 61 are regular members, of which 3 are enjoying the final months of the first year free experience.

John / N8FYL — 10/27/2020



Amateur radio enthusiast guide to **SOCIAL DISTANCING**

We will get to exercise our distancing skills at the November meeting. Let's all do our best to maintain that 2.0 meter separation between our vocal transmitters.





The Original Repeater

**The Livonia Amateur
Radio Repeater Group
W8WW/r 443.650+
Presents**

**W8WW/r
Repeater
443.650+**



Outdoor Swap N Shop

Buy Sell Trade

Electronics, Radio, Computers and more!

Sunday November 8th 2020

8 Am - 12 PM

(Rain Date November 15th)

Admission \$3

Trunk Sales \$10

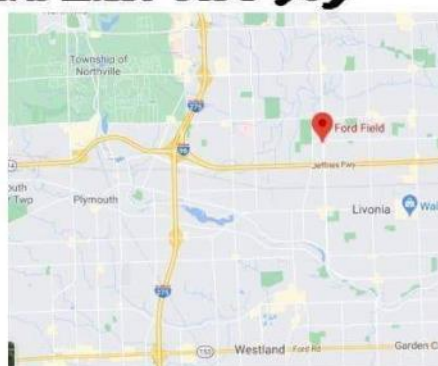
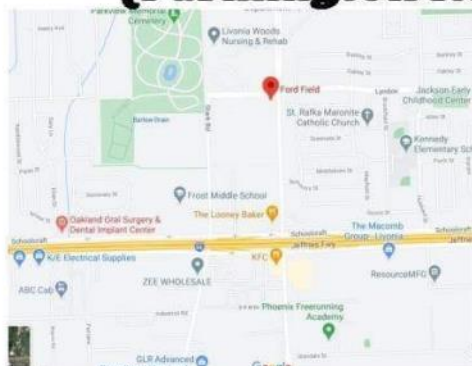
(include 1 admission)

WE NEED VENDORS - PRE-Register for \$3 Discount

Ford Field Parking Lot

Farmington and Stark Roads, Livonia Michigan

(Farmington Road Exit on I-96)



Questions: James Keller (734) 674-2866

Email: LarrgRepeater@gmail.com

Masks and Social Distancing Requested

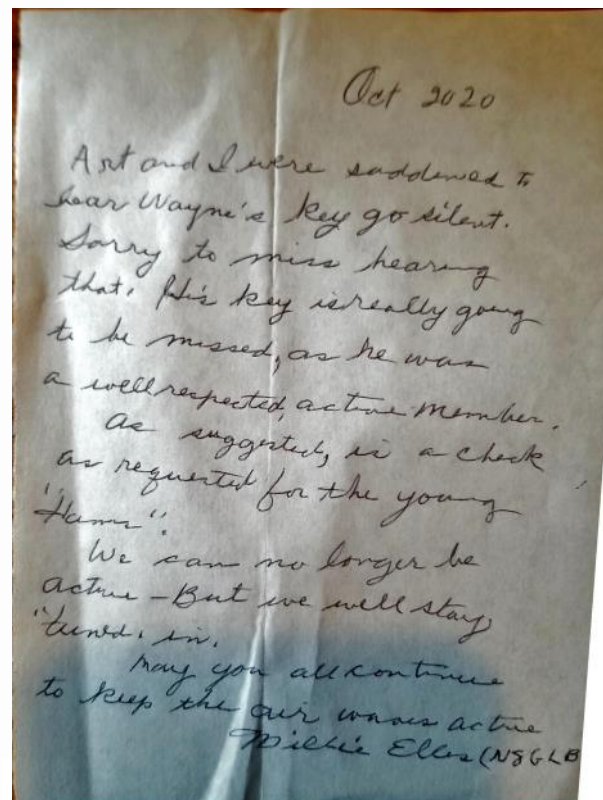
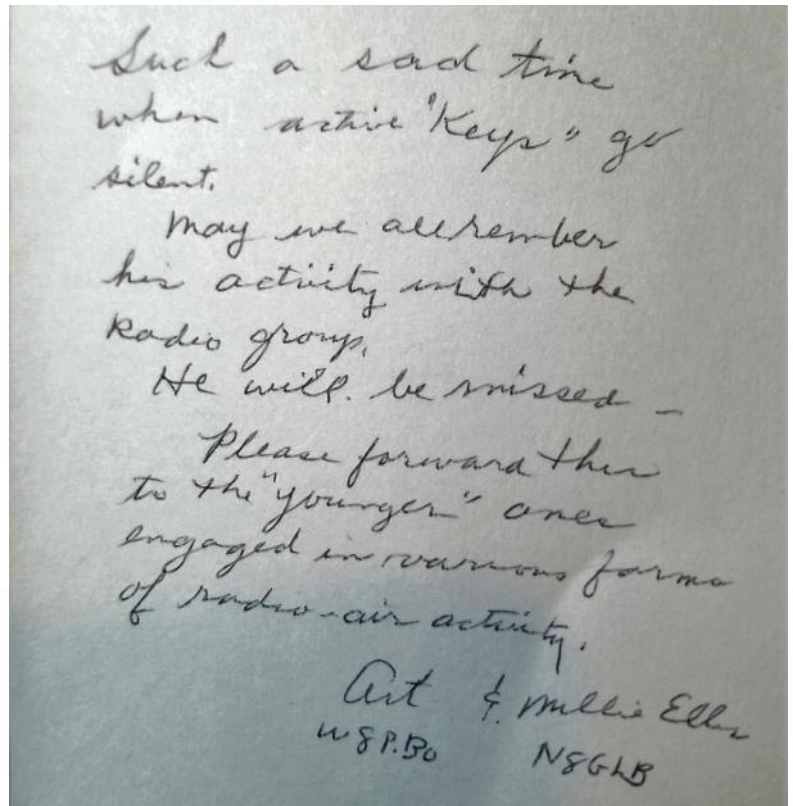
TalkIn on 146.52 Simplex

We are not the Livonia Amateur Radio Club.

We are a Repeater Group located in Livonia, Mi

Club Founder W8PBO commemorates silent key Wayne/WG8U

The club received a note and a donation for the Youth Forum from Art/W8PBO and Millie/N8GLB. Below are images of the card and their comments. I think we all share their sentiments.



Such a sad time when active "keys" go silent. May we all remember his activity with the radio group. He will be missed. Please forward this to the "younger" ones engaged in various forms of radio air activity.

Art / W8PBO & Millie / N8GLB Ellis

Art and I were saddened to hear Wayne's key go silent. Sorry to miss hearing that. His key is really going to be missed, as he was a well respected active member. As suggested, in a check as requested for the young "Hams".

We can no longer be active—but we will stay "tuned in". May you all continue to keep the air waves active.

Millie Ellis(N8GLB)

Repeater Shack Roof gets a new “Coat”

On a warm Sunday, October 11, 2020, Gregg/N8GEO and Mark/N8REZ applied the new coating of sealant to the roof of the building housing the L’Anse Creuse Echo repeaters. Here are the submitted photos of the activity.



Gregg/N8GEO above and right. Mark/N8REZ below.
From the provided documentation, it looks like Gregg worked and Mark supervised. I wasn't there, soooo we'll have to check with these guys to verify that observation. HiHi. Ur Editor/N8FYL



Review of Yaesu FT2980R 2 Meter FM Transceiver

By: Carl Davis, W8WZ October 2020

Recently the 2-meter rig that I had been using for about 10 years gave out. Reports of hum on my audio were the start of the problem, next came reports that my audio had become tinny and then came the reports that I was over deviating. It was time to get a new radio.

It had been a while since I went radio shopping for an FM rig so I was interested to see what offerings were on the market. There are many good products out there and the one I chose was the Yaesu FT2980R for the following reasons.

1. Price. At \$139.95 from DX Engineering the value was hard to beat. They offer free shipping on orders more than \$100 so this qualified for that offer. After tax I paid \$150.10 delivered.
2. Power. It offers 80 watts RF output. It can be used at 5 watts, 10 watts, 30 watts or 80 watts. 80 watts is a good bit of power for 2 meter FM work. My old radio ran 45 watts on high power.
3. Dedicated squelch knob. Many radios these days do not have a standalone squelch knob. They require the user to press a function button to make the multipurpose knob control the squelch level. When using FM, it is very nice to be able to quickly adjust the squelch with the fast turn of an easy to use knob. I like that this radio allows that.
4. A button to instantly listen on the repeater's input frequency. Many new radios do not offer this function either. They require a multi button pressing process to hear the input frequency. When using FM Repeaters, it is nice to quickly press one button and hear the input frequency instantly, then instantly return to the repeater's output frequency again. This quick switching allows the operator to quickly see if he or she can hear the other person on the input and know if a simplex contact is possible without missing much of the transmission if it turns out the other station cannot be heard directly. Also, if a station is weak into the repeater it is easy to quickly switch to the input to see if they can be heard directly. This is especially when calling a net or when net control asks for a relay on a weak station. Making this function accessed with just a quick button press is very desirable.
5. The radio offers an adjustable mic gain control. Most FM only radios do not offer an easy way to adjust microphone gain. This radio does. It comes set to level 5 as a default and can be adjusted for levels 1 to 9 with ease. This is helpful to make the radio's signal sound good for each operator's individual voice level and preference for where they prefer to hold the microphone when transmitting.
6. The radio does not use a cooling fan. It is a very solid radio, weighing more than 4 pounds, most of which is a heavy-duty heat sink. I prefer radios that use heatsinks instead of fans for several



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reasons. First, fans can be noisy. Next, fans are prone to failure over the years due to the moving parts (bearings) and finally, a fan is moving dirty, dusty air around the radio and in the case of my shack, sucking my cigar and pipe smoke into it. While fans are needed in many circuits, given the choice of a circuit that needs a fan and one that does not, I'll choose the one that doesn't.

Another feature I like is that the radio uses a dedicated push button to turn it on and off. I prefer this option over models that use the volume potentiometer as the on/off switch. The button method results in less wear on the volume pot and allows the volume level to stay at the desired level instead of needing to be re-adjusted each time the radio is turned on.

The radio arrived via Fed-Ex only 3 days after I ordered it. I was able to take it out of the box and put it into the station without the need to consult a manual. It was very intuitive and easy to use right away. Dedicated knobs and well labeled buttons helped with that.

I have a Yaesu FT1500M that I have used for mobile operation since 2001. This radio uses the same Yaesu MH 48 Microphone as that radio. The microphone is backlit (can be turned off) with a nice red light and fits well in the hand. The menu system used on the FT2980 is very similar or identical to the menu system used by Yaesu back in 2000 when they made the FT1500M. Having used that radio for 20 years, using this one's menu system is not hard. I think it would also be very intuitive to a new user as well. The manual is as well written as any manual is and there are many videos on YouTube showing how to make the most common adjustments to the radio.

The display is large and easy to read. The display is about 1-inch-tall and 3 inches long. It is amber in color and the letters/numbers on it appear in a dark gray. It is bright and the contrast is good. There is nothing confusing or distracting with the display. The brightness level can be adjusted to user preference. It shows power level, repeater off set (- or +) or indicates simplex operation by showing neither sign, and it shows if the radio is set to VFO mode or Memory mode. Out of the box it is set to automatically use the standard repeater off set whenever a repeater frequency is entered. This can, of course, be changed in settings. But most hams will find this feature to be great.

The audio output level is more than adequate at 3 watts. I have mine attached to an external Yaesu speaker that matched the FT101E series of radios and I only need to turn the volume knob slightly past zero to have room filling audio that is full and pleasing to the ear. The radio would do well in mobile service because of its solid construction, loud audio output and the ability to adjust mic gain to accommodate for background road noise pick up. Mine will perform its service here in the house on the operating desk.

The radio has all the features one would expect such as PL tones, memory channels, alpha/numeric display, NOAA weather receive, scan functions and much more.

The radio comes with a mobile mounting bracket, microphone, microphone hanging clip, power cord (using standard Molex spade connectors), extra fuses, the manual and warrantee card. It is packed very well in a cardboard box that is designed to protect the radio and accessories well during shipping. The radio weighs more than 4 pounds and is about 7 inches deep, 6 inches across and 2 inches tall. The antenna jack is a standard female UHF connector, and the speaker output is a 1/8" mono jack. The built-in speaker is on the bottom of the radio. The design is very standard and sturdy. I think anyone looking for an analogue 2 meter FM radio would do well with the FT2980 be they a brand new ham or an experienced operator. At this price it might even be a good idea to pick one up as a backup.

AMSAT 2020 Space Symposium video now online

By Dan Romanchik, KB6NU

The 38th AMSAT Space Symposium and Annual General Meeting was held online on October 17, 2020. I am kind of bummed about this because I just joined AMSAT, but somehow, I managed to miss this event. Fortunately, the symposium was recorded and is now online, and I have been enjoying watching the video (https://www.youtube.com/watch?v=EHDgrl_w8hY).



The video includes updates on AMSAT projects and presentations on amateur satellite technology. For details on presenter names and presentation titles, visit the AMSAT website. AMSAT members can access the Symposium Proceedings on the AMSAT website as well. (The proceedings for all the AMSAT Symposiums are available there as well, but you do have to be an AMSAT member.)

Here is a list of the different presentations on the video and the times at which they start:

0:00:00 Welcome

0:02:07 AMSAT GOLF-TEE System Overview and Development Status

0:43:02 GOLF IHU Coordination

1:19:10 GOLF Downlink Coordination

1:50:15 FUNcube Next

2:13:50 LunART – Luna Amateur Radio Transponder

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2:45:35 CatSat HF Experiment Overview

3:13:30 Neutron-1 CubeSat

3:39:58 Progress and Development of Open Source Electric Propulsion for Nanosats and Picosats

4:15:00 AMSAT Education

5:14:00 ARISS (Amateur Radio on the International Space Station) / AREx (Amateur Radio Exploration)

6:14:00 AMSAT Engineering

7:21:16 AMSAT Annual General Meeting

So far, I have only watched the GOLF-TEE System Overview and the AMSAT Education presentation. They were both interesting and I'm looking forward to watching the others.

I really had not been keeping up with AMSAT lately, so the presentation on the GOLF project was definitely news to me. GOLF is an ambitious project aimed at sending up high Earth orbit (HEO) satellites. GOLF is short for "Greater Orbits Larger (user communication) Footprints." This is really pretty exciting stuff.

Watching these presentations really gives one an appreciation for the work that goes into the design of these satellites and the technical skills and dedication of the hams working on these projects. These guys are not getting paid to do any of this work, and as Eric Skoog, K1TVV, the GOLF System Engineer said in his presentation, "Space is hard."

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Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the "No Non-sense" amateur radio license study guides (KB6NU.Com/study-guides/), and often appears on the IC-QPodcast (icqpodcast.com). When he's not trying to work the satellites, he teaches online ham radio classes and operates CW on the HF bands.

For Sale

Ten-Tec Hercules II 500 Watt Amplifier

This solid state amplifier was purchased from Ten-Tec at Dayton (when it was really "Dayton") a number of years ago. It is offered "as is" because the last time I used it the device did not behave 100% as expected—not really DOA, but it probably needs some TLC. This led to its replacement last spring.

Included with the unit are the TenTec manual and the fused HD cabling that will connect it to a power supply—I used a storage battery and a trickle charger.

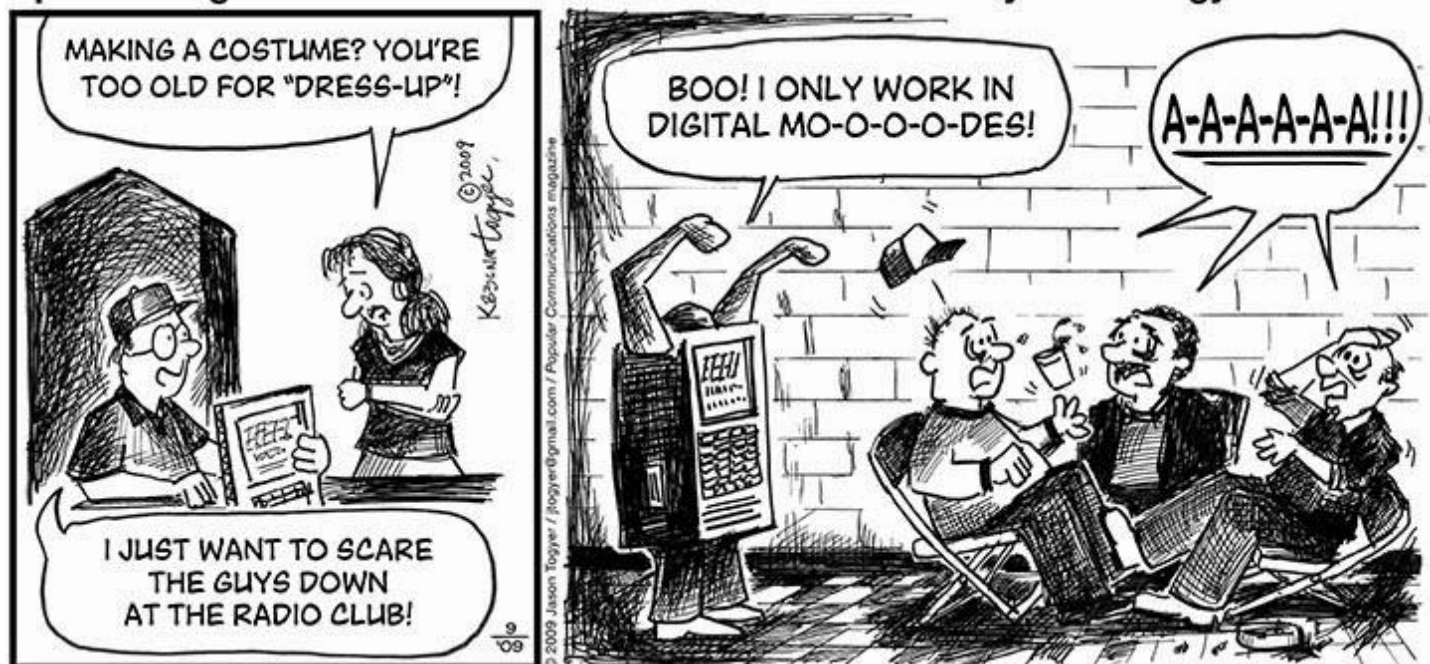
Asking \$200 or make an offer and get a possible addition to your shack.

Ted NW8W 248 647 1628 nw8w@arrl.net



Spurious Signals

By Jason Togyer KB3CNM



SPURIOUS SIGNALS

By Jason Togyer KB3CNM



Future Programs & Activities

Scott Hernalsteen, W8CQD — Activities Manager

- November 4, 2020 Regular meeting night, the first in person since March!
- November 7, 2020 ARRL Sweepstakes contest—CW
- November 21, 2020 ARRL Sweepstakes contest—SSB
- December 2, 2020 Regular meeting night
- January 6, 2021 Regular meeting night

L'Anse Creuse ARC Board Members – 2020

President

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40202 Vincenzia Dr
Clinton Twp, MI 48038-4084
586-201-5713
w8cqd@arri.net

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Technical Officer

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St Clair Shores, MI 48082
(586) 775-1891
n8pyn@yahoo.com

Analog FM

N8LC

Fusion Digital Only



LC Echo 2 Meter Repeater
Yaesu DR-1X 147.080 MHz
100 HZ PL



LC Echo 440 Repeater
Yaesu DR-1X 442.925 MHz
100 HZ PL

Board Meeting Time and Location

Board Meetings are held at 7 pm on the Wednesday after the regular membership meeting in September, November, January, March, and May. The location for November 2020 is at W8CQD's QTH. Inside or outside will depend on the weather. is [Roseann's Kitchen, 21400 15 Mile Road, Clinton Charter Township, MI.](#) All club members are welcome to attend and have dinner. Talk-in through the LCARC ECHO 2 Meter repeater (147.080 MHz, +600 KHZ, 100 Hz PL tone). Should a board meeting have a planned cancellation, this cancellation will be announced in the newsletter.

Club Founder - Art Ellis W8PBO

Club Committee Chairmen

ARRL HF Awards Manager	Tom Mathison	WU8C	Little Bay Awards	Dale McGorman	K8RO
ARRL HF Awards Assistant	Vince Cuker	WA8BIJ	Meeting Refreshments	Russ John	N8HAR N8NXW
ARRL VHF/UHF Awards Manager	Allan Koch	KA8JJN	Membership Chairman TC email distribution	John Huber	N8FYL
Call Sign ID Tags	Gregg Crump	N8GEO	Net Points Manager	Tom Mathison	WU8C
Christmas Party	Cathy Chauvin	KC8WNK	Net Points Upgrade Awards	Clem Duval	W8VO
Club Apparel & Patches	Scott Hernalsteen	W8CQD	TC Postal Distribution	John Huber	N8FYL
Club Call Trustee - N8LC	Marty Folz	K8HVI	Outgoing QSL Manager	Dale McGorman	K8RO
Code Proficiency Awards	Vince Cuker	WA8BIJ	QSL Cards	Dale McGorman	K8RO
Dayton Trip	Gregg Crump	N8GEO	Swap Chairman	Russ Price	N8HAR
Door Prizes—Buyer	Doug Chauvin	N8PYN	<i>Tuned Circuit</i> Editor	John Huber	N8FYL
Door Prizes—Tickets	TBD		Volunteer Exams	Gregg Crump	N8GEO
Echo Repeater Trustee	Marty Folz	K8HVI	Webpage (n8lc.org)	Doug Chauvin	N8PYN
Field Day	Gregg Crump	N8GEO	Webpage Assistant	Marty Folz	K8HVI
Health & Welfare			Youth Forum (50/50) [Alternate]	Ralph Irish John Slobodnik	W8ROI N8NXW
Licensing Classes	TBD				

The Tuned Circuit

This publication of the L'Anse Creuse Amateur Radio Club is issued for the months of September through June of each year. *The Tuned Circuit* has been formatted to be read easily with any reader programs for our visually impaired readers; however, an audio tape or a larger print version of its contents will be made available, upon request to the editor. We welcome any comments, concerns, corrections, congratulations, or complaints. Please submit such communications to the [Editor](#):

John H. Huber N8FYL

Email: n8fyl@arrl.net or editor@n8lc.org

Phone: (248) 740-2693

Submissions will be accepted in any of the standard PC formats. Microsoft Office, Open Office, plain text, rich text, PDFs, and any type of image format. Unfortunately audio files and movies cannot be accepted, as they cannot be reproduced on paper, but links can be reproduced to these types of media if you'd like to provide a link.

VE Testing Locations

Ann Arbor (ARROW)): Mark Goodwin,
W8FSA, w8fsa@arrl.net, 734-930-6564.
Second Saturday of each month.

Hazel Park—Jerry Begel, W9NPI,
w9npi@arrl.net 248-543-2284

First Tuesdays of Even Months.

Howell ([Livingston Amateur Radio Klub](#))
Second Tuesday of each month, 7PM, at
the Livingston County EMS Facility, 1911
Tooley Road, Howell, MI. ALL AMATEUR
EXAMS AT THESE SESSIONS ARE FREE.

LCARC

Would have been December 6, 2020 at
our swap , but the swap is canceled.

Motor City 313-676-6284

USECA <http://usecaarc.com/test/>

1st Monday Monthly except during the
months of July and August at 7 pm at
[Macomb County Emergency Management & Communications, 21930 Dunham Rd, Mt. Clemens MI.](#)

Online Practice Exams:

<https://www.eham.net/exams>

<https://www.qrz.com/hamtest/>

<http://www.ah0a.org/AHOA.html>

Morse Code Resources:

Learn CW Online <https://lcwo.net/>

<http://www.g4fon.net>

<http://www.pdarrl.org/k6rau/>

<http://www.ac6v.com/morseaids.htm>

<http://morsecodemasters.com/trainer/Examples/hct.html>



Upcoming Swaps

!!! NEW SWAP !!!

11/08/2020 - [Livonia Amateur Radio Repeater Group Outdoor Swap N Shop](#)

Location: Livonia, MI

Type: ARRL Hamfest

Sponsor: Livonia Amateur Radio Repeater Group

Website: <https://www.facebook.com/groups/2392995587672556>

[Learn More](#)

11/14/2020 - 11/15/2020

CANCELED - Fort Wayne Hamfest & Computer Expo.
ARRL Central Division Convention

Location: Fort Wayne, IN

Type: ARRL Convention

Sponsor: Allen County Amateur Radio Technical Society

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

[Learn More](#)

12/06/2020 - **CANCELED - LCARC Amateur Radio SwapHamfest**

Location: Madison Heights, MI

Type: ARRL Hamfest

Sponsor: L'Anse Creuse Amateur Radio Club

Website: <http://www.n8lc.org>

[Learn More](#)

There are NO other ARRL hamfests in our area to list here.

L'Anse Creuse Amateur Radio Club Nets

Day	Local Time	Band	Mode	Frequency	Net Control	Calendar
Monday	2000	15 M	CW	21.165 MHz	Clem, W8VO	Every Monday
Monday	2030	15 M	USB	21.395 MHz	Clem, W8VO	Every Monday
Monday	2100	6 M	USB	50.160 MHz	Gregg, N8GEO	Every Monday
Tuesday	2000	2 M Internet	Packet telnet	144.93 MHz ve2har.dyndns.org	RF Net is QRT Ralph, W8ROI	Every Tuesday (Connect to detqso)
Tuesday	2100	2 M	FM	147.08+ MHz	Sterling Heights CERT	2nd Tuesday of the month An LCARC sanctioned net run by the Sterling Heights CERT
Thursday	1930	10 M	USB	28.435 MHz	Clem, W8VO	Every Thursday
Thursday	2030	2 M	FM	147.08+ MHz	Clem, W8VO	1st Thursday
					Mike, AC8ER	2nd Thursday
					Gregg, N8GEO	3rd Thursday
					Mike, AC8ER	4th Thursday
					Fritz, KE8BFW	5th Thursday

Membership Request

Date: ____/____/____

Request For:

L'Anse Creuse Amateur Radio Club

Gregg Crump, N8GEO

29729 South River Rd

Harrison Twp MI 48045-3030

Only membership applications to go this address.. Make sure you use the full 9 digit zip code when mailing in your application.

Treasurers Box

Date Paid: _____

Amount: _____

Initials: _____

___ \$20.00 LCARC Individual Membership
Are you a New Member? (Y / N)

___ \$30.00 LCARC Family Membership

___ \$10.00 Print and Mail me *The Tuned Circuit* via US Mail

___ \$2.00 LCARC Student Membership (Under 18 years of age)

___ \$10.00 Club Badge created with my Name and Call sign

___ Please update my membership information because it has changed.

Note: LCARC dues are from **Nov 1st** to **Oct 31st****Class License (Circle One)**

Novice Technician Tech+

General Advanced Extra

I am an ARRL Member: (Y / N / Life)

Call sign: _____ Old Call Sign: _____ Street: _____

Name: _____ City: _____ State: _____

Spouse: _____ Zip: _____ - _____ 6 Character Grid Square (optional): _____

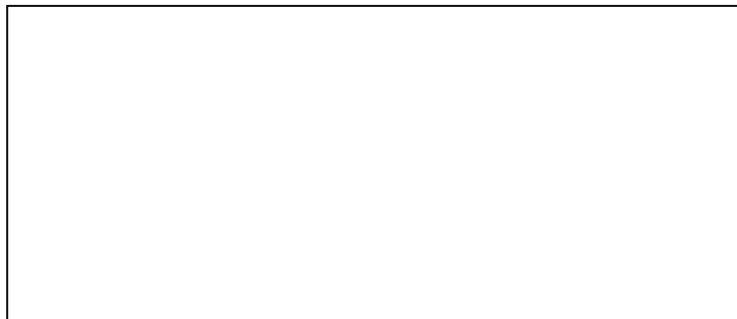
Phone: (_____) _____ - _____ Email Address: _____

(Please indicate your name above even if it hasn't changed, so we know who's giving us money and can mark that you've paid in our records.)

The Tuned Circuit

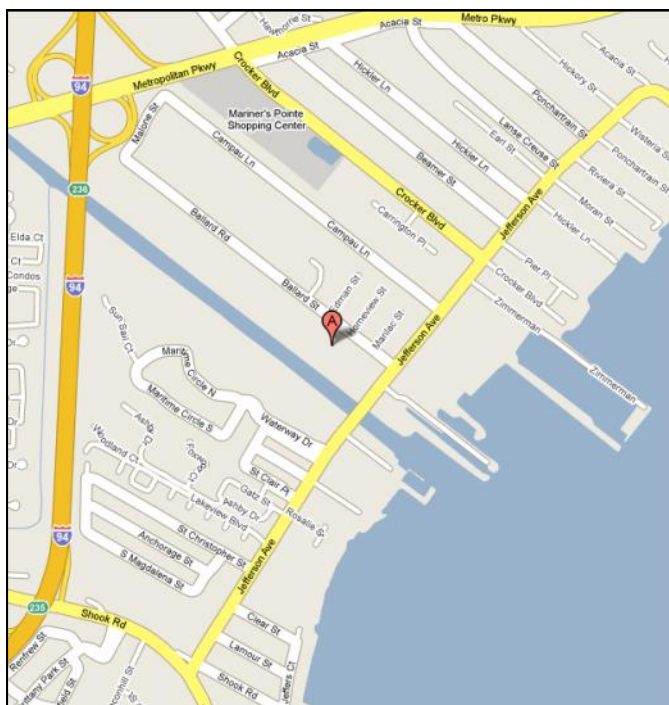
**Monthly Bulletin of the
L'Anse Creuse Amateur Radio Club**
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The L'Anse Creuse Amateur Radio Club meets at 7:00 pm the first Wednesday of each month, except during July and August. Meetings are held at Tucker Senior Center located at 26980 Ballard St, Harrison Township, MI 48045 unless indicated otherwise in the most current issue of the Tuned Circuit. Call-in on the Echo Repeater (N8LC) on 147.08 MHz (+ 600 KHz, 100 Hz PL tone) for any meeting information, or to ask a member for the location of the meeting.