



FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —



VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020

Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

Club Officers

President: Tom Karmann KC9VZY
Vice-President: Tom Powell KC9VXR
Secretary: Lloyd Vandervort N9RPU
Treasurer: Doug Schultz N9EZF
Sgt-at-Arms: Paul Bleuel KC9NAA

Board Member: Ron Keller KC9YVL
Board Member: Justin Buell KB9YET
Board Member: Larry Mielke KC9RUE

Committee Chairs

Brat Fry: Doug Schultz N9EZF
Contesting/
Education/
Scholarship: Jack Heil KG9IN
Field Day: Jack Heil KG9IN
Fund Raising: Open
Net Manager: Doug Schultz N9EZF
Newsletter
Public Service: Ed Beltz N9PJQ
Publicity/Program: Joe Scheibinger K9VY
Repeater: Lloyd Vandervort N9RPU
Testing: Doug Schultz N9EZF
Truck: Brad Freund KC9QYP
TVI: Lloyd Vandervort N9RPU
Web Site: Tim Braun W9AAV

Each committee has several members. If you are interested in serving on a committee, please contact the chairperson and volunteer your services.

Mailing Address

Fond du Lac Amateur Radio Club, Inc.
PO Box 53
Fond du Lac, WI 54936-0053
E-mail: fdlhams@fdlhams.org

**Newsletter
Submissions:**
Please email to

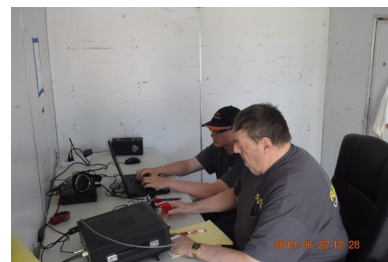
HAM of the Year

Rick Robinson NI9Z was selected as this years Ham of the Year at our annual Christmas Party. This is a long overdue recognition for all the efforts Rick has made on behalf of the club.

While he is always available to help out at the Brat Fries and other club events, he is most well known for his efforts to build the CW capability of the club. Rick has trained our two youngest members on code and has helped them get on the air with loaned equipment.

He has also run one on one classes to fit individual schedules for many of our other members. In fact, Rick is starting a new set of classes during the new year. If you are interested, please contact him at rkrobin1@att.net or by phone at 920-924-9559.

Here is a link to watch Rick Robinson accept his Ham of the year award. <https://youtu.be/RiFIUAOS2wo>



Next Meeting

When: Jan. 13, 2020 at 7:00 pm

Where: Moraine Park Technical College, Room O-103
235 N National Ave, Fond du Lac, WI 54935

Everyone attending the club meeting will have park in the C lot at MPTC since the O lot and O entrance is closed for construction until August. You will have to enter using the South door from the C lot.

Program: Alternative Energy



FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —

VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020



Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

President's Comments:

By Tom Karrman KC9VZY

Welcome all to 2020. Ready or not, it's here. I would personally like to thank all club members for making this an engaging group with spirited meetings. I, personally, have stuck around because the group appears to have a good dynamic, and is populated with people who care.

We have had a good year for 2019 which culminated in our application for 501c3 status while taking up a lot of meeting time and attention. As this process winds down, we now need to move forward with our plans for 2020.

We need to collectively define our goals for this year, and so I am asking that everyone would take a few minutes to determine what we like and don't like about the club, and what we can do about it. I am hoping to get a few attainable goals defined early in the year so we have time to actually work on them.

I guess that's all for this month, although that should open a lot of opportunities for anyone who has ideas about what we can do this year. I will do my best as I transition into club president, and am open to any cordial communications you would like to have.





Alternative Energy Specialist Robert Bruninga to Speak at January FARC Meeting

When you Google Alternative Energy you get 567 million posts! There is no question this is one of the hottest topics trending right now. And for Ham Radio operators, they have been on the forefront of this revolution ever since the beginning of the hobby with all kinds of new and exciting ideas.

Alternative Energy refers to energy sources other than fossil fuels. This includes all renewable sources and nuclear. Nuclear is not classified as a renewable energy source. A renewable energy source is produced from sources that do not deplete or can be replenished within a human's life time.

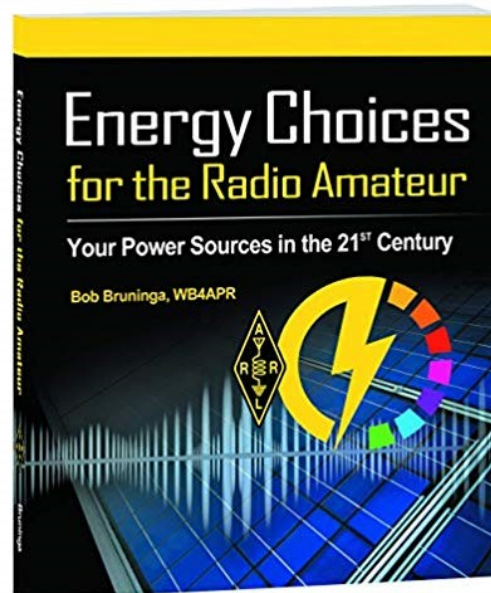
At Monday's meeting we will meet the man who actually wrote the book on Alternative Energy! Robert Bruninga's book, "Energy Choices for the Radio Amateur" is available on Amazon and through ARRL. He also wrote the book "APRS (Automatic Packet Reporting System) an on-air protocol" used by 40,000 or more users worldwide in a global system (including satellites) for supporting handheld position reporting and text messaging via VHF radio.

His credentials are stunning. He has an M.S. and a B.S. in Electrical Engineering from Georgia Tech and the navy post graduate school. He is currently a senior research engineer for the Navy and has been since 1990. Robert has been a radio amateur since 1962 and his call letters are WB4APR. Robert has also received the Technical Excellence Award, Dayton Hamvention, 1998, and the YASMEE Foundation Technical Award for APRS, 2010.

"Energy Choices for the Radio Amateur" is a 320 Page book of Full Color Photos and Illustrations. Revolutionary changes are taking place in the way we produce and consume power for our homes, transportation, and the technology that we use every day. The book explores the ongoing changes in the world of power and energy, and takes a careful look at the choices we can make. Home solar or utility power? Oil/gas heat or electric heat pump? Gas car or hybrid/EV? and most important, Energy Choices for the Radio Amateur It is intended to help other radio amateurs and DIY hobbyists prepare for the inevitable major energy decisions they will face. Choices that can contribute to a reduction in fossil fuel use and save money in the long run. The concepts presented in this book not only satisfy everyday power requirements, but also can help prepare for emergency and backup power at home and in the field.



See you at the meeting on Monday evening and please, bring a friend!





FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —



VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020

Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

FDLARC 2020 Officers

The highpoint of our November meeting was the election of officers for the 2020 calendar year. As always we were able to put together a great slate of candidates and elect some officers who will do a great job of moving the club forward during the next year.

Many of the officers are carrying their existing titles over from last year. The officers for 2020 are:

President: Tom Karmann KC9VZY
Vice-President: Tom Powell KC9VXR
Secretary: Lloyd Vandervort N9RPU
Treasurer: Doug Schultz N9EZF
Sgt-at-Arms: Paul Bleuel KC9NAA

Board Member: Ron Keller KC9YVL
Board Member: Justin Buell KB9YET
Board Member: Larry Mielke KC9RUE



**PRESIDENT
TOM KARRMAN**



**VICE PRESIDENT
TOM POWELL KC9VXR**



**SECRETARY
LLOYD VANDERVORT N9RPU**



FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —



VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020

Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

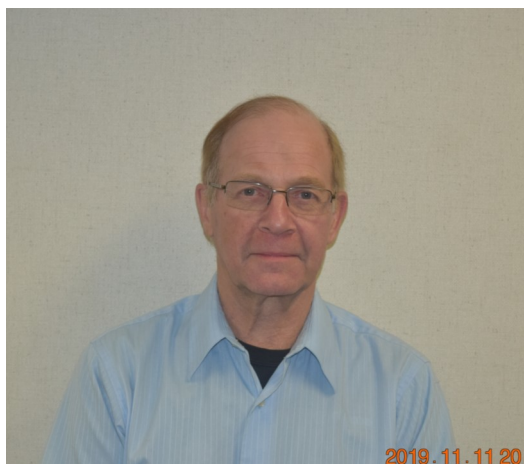
FDLARC 2020 Officers



TREASURER
DOUG SCHULTZ N9EZF



BOARD MEMBER 1
RON KELLER KC9YVL



SARGENT AT ARMS
PAUL BUELL KC9EAA



BOARD MEMBER 2
JUSTIN BUELL KB9YET



BOARD MEMBER 3
LARRY MIELKE KC9RUE



FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —

VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020



Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

December 14, 2019 HAM Testing

Doug Schultz N9EZF coordinated our fourth, and final, HAM Testing session of 2019. He received a helping hand from Jack Heil KG9IN and Dick Finn KC9ZVW.



As with the last testing session, this one was moved to a different room. This time it was due to construction in the "O" wing at MPTC. Doug only received about two days warning but did get the word out. Our candidates managed to find their way to the correct room in the "C" wing with no problem.

After the testees had left with their new tickets, we talked about our roster of VE's. As it stands now we have seven HAMS that are qualified to administer the tests. For a valid testing session, three are required. Our current Volunteer Examiners (VE's) are:

Doug Schultz N9EZF
Joe Scheibinger K9VY
Jack Heil KG8IN
Brad Freund KC9QYP
Dick Finn KC9ZVW
Tom Powell KC9VXR (Can administer only Technician and General Class Exams)
Kyle Ruesch AB9AX (moved out of the area)

In order to administer all classes of exams you need to be an Extra Class. A general class can administer Technician and General Class exams. If you would like to join our crew all you have to do is visit the ARRL web site and review the process for becoming a VE. Basically all that is required is to download and read the VE manual and then take the open book test.

The following HAMS passed tests at the session:

Robert Nonn	Technician
Charles Canaar	Technician



Robert Nonn from Appleton receives his Technician ticket from Jack Heil KG9IN



Doug Schultz N9EZF awards Charles Canaar his Technician Class License.



Vintage Amateur Radio de Bill Shadid, W9MXQ



This month we are moving back to a classic brand in ham radio through the early 1980's, the R. L. Drake Company of Miamisburg, Ohio. Drake, widely known for the very popular R-4 and T-4X series separate receivers and transmitters and perhaps even more so for the TR3 and TR-4 series Transceivers. We have covered those models in earlier columns¹. This month I want to talk about one of Drake's last high frequency transceivers and their first one using all solid-state circuitry. This would be the very popular model TR7.

The TR7 was rather revolutionary in appearance back at the time of its introduction in 1977. It had clean lines, an uncomplicated front panel, and all solid-state design with a very durable final amplifier. Compared it to its competition, the TR7 was a step in a new direction:



Drake TR-7 Transceiver

(One of two working TR7's – plus a TR7A – in the W9MXQ Collection)

Drake was well known not only for its receivers, transmitters, and transceivers but also for a fine line of accessories to compliment their radios and those of other manufacturers as well. Drake's Linear Amplifiers – like the L-4 and L-4B models – were known for being some of the best in the industry. They also offered a line of Antenna Tuners – like the MN-4, the MN-4C, and the MN-2000. As you have seen in earlier installments about Drake equipment¹, these accessories also included Dummy Loads, and Remote Antenna Switches. Drake even entered the VHF and UHF-FM transceiver market with their own designs as well as equipment from partner in Japan. Some of you may remember such radios from Trio (Kenwood) (TR-22, TR-22C, TR-33C, and TR-72) and Marker Luxury (ML-1).

Drake marketed a complete line of accessories to match their new solid-state TR7 Transceiver. They duplicated the accessories they manufactured in the days of the R-4 Series Receivers, The T-4X series transmitters, and the TR-3 / TR-4 / TR-4C series transceivers. Here is a look at a fully equipped Drake TR7 station that is typical of the late 1970's and early 1980's. This station is in regular operation, today, at W9MXQ:



FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —

VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020



Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

Vintage Amateur Radio (cont.)
de Bill Shadid, W9MXQ



Drake TR7 Line Station with Accessories

**Left to Right – MN-2700 Antenna Matching Network, TR7 Transceiver,
RV7 External VFO, and Drake L7 Linear Amplifier**

**Also Shown Left to Right – P75 Phone Patch, WH7 Wattmeter,
MS7 Speaker SP75 Speech Processor – along with 7077 Desk Microphone
(W9MXQ Collection)**

Not shown above in the complete station picture are other accessories that complimented or replaced what is shown. The 300-watt Drake MN75 Antenna Matching Network was an alternative to the 2,000-watt MN2700. The 1,000-watt Drake L75 Linear Amplifier (with an internal AC Power Supply) was an alternative to the 2,000-watt L7 (that had a floor mounted AC Power Supply). Drake also marketed a PLL based, external VFO called the RV75 that was a step ahead of the RV7 in stability. See pictures, below:



Vintage Amateur Radio (cont.) de Bill Shadid, W9MXQ



Going back a bit, now, by the mid-1970's the domestic (USA) manufacturers were getting concerned about the move to all solid-state radios – at least in the concept. By that time, Swan/Cubic, Drake and Heathkit were the market leaders. Collins was playing along with successful, if dated, designs. At that time, I was a Drake user with a new R-4C Receiver and T-4XC Transmitter. But those radios were aging in design – even though the much touted (to this day) R-4C Receiver a mostly solid-state design and very competitive. In the mid-1970's, Drake was working hard to replace its aging TR-4 series transceivers. The Drake TR-4C, the last model series of that transceiver, did not share the advanced design of the separate R-4C and T-4XC radios. Drake was fast losing market share to more modern designs from other manufacturers. The TR-4C series was a mostly vacuum tube design with the only real significant move being the change from a vacuum tube permeably tuned VFO in the TR-3 to the more modern and stable solid-state version in the TR-4 line. To be sure, Drake was trying to keep the TR-4 competitive as they came out with a version (TR-4CW) that added a switchable CW Filter, and later a version (TR-4CW/RIT) that added Receiver Incremental Tuning to make operating more convenient. Drake was seeing significant “feature competition” from the Japanese products coming from Kenwood, Yaesu, and soon from Icom. The result was a revolutionary design – the concepts of which are with us to this day from many manufacturers.

The step to a complete solid-state design was fraught with risk, or so Drake thought. Fears of problematic and/or failed designs that had already been seen on the market from others were in front of Drake's management. Drake's engineers were heavily into vacuum tube designs and lacked the expertise to give the company's management confidence in managing the risk of such products. Those issues were seemingly solved by hiring the Designer of the solid-state Heathkit SB-104 Transceiver from the Heath Company as well as another fellow who would later be the founder of Cincnnati Microwave (maker of the Escort Radar Detector) to lead the TR7 design^{2, 3}.

Drake's TR7 final amplifier was exceptionally well designed and stood the test of time. Likewise, the matching PS7 AC Power Supply was a massive analog unit that was virtually indestructible – and very heavy. Both the TR7 and the PS7 could be equipped with the plug-in FA7 Fan unit to allow the transceiver and power supply to run full power, continuously.

The real claim fame with the TR7 was “Up Conversion” in the radio's i-f circuit. The TR7 has a first i-f in the 40 MHz range that virtually eliminated “birdies” in the conversion process and even eliminated the old 9 MHz i-f so common in early SSB designs that were the reason that 160-80-40 meters were lower sideband and 20-15-10 meters were upper sideband. (That is, either side of a first i-f of 9 MHz, if you will.) If you ever wondered why we have the LSB and USB split the way we do, you heard the answer here! You might also credit McCoy Electronics – makers of some of the first commercially available 9 MHz center frequency Crystal I-F Filters used in very early SSB Transmitters. There will be more about the TR7 conversion scheme in a follow-up article.



Vintage Amateur Radio (cont.) de Bill Shadid, W9MXQ



As the market for the TR7 matured and the competition was increasing, Drake made a marketing decision to move to the TR7A model. There was essentially no difference from very late TR7's and the newer TR7A – and actually, for some reason lost to time, the two were made in parallel for a time. The TR7A was a TR7 with the following options made standard equipment (as noted by WB4HFN⁵):

- The NB7 Noise Blanker was included.
- The SL500 500 Hz CW Filter was included.
- A by-pass resistor was added to allow for AM operation using the Roofing Filter for bandwidth control.
- A surge protector was added to the receiver front end to protect the radio from static charges.
- An unused Phono Connector on the back panel was wired to provide low level audio input.

Here are a couple of pictures of the TR7 and TR7A models to show the minimal outward difference between them:



Drake TR7 HF Transceiver

(W9MXQ Collection – and like the one in the W9DYQ Collection)

(This W9MXQ TR7 is mid-production cycle – the W9DYQ TR7 is very late in the production cycle)



Drake TR7A HF Transceiver

(W9MXQ Collection)



Vintage Amateur Radio (cont.) de Bill Shadid, W9MXQ



If you noted that nothing is different besides the model number (upper right-hand corner) you would be correct. (Well, you sharp eyed readers might notice the two radios are on different bands and modes!!) For the most part – with a few exceptions, like an updated and more linear PA Pre-Driver and a redesigned Noise Blanker on later TR7's and all TR7A's. All TR7's from the first ones to the very latest TR7A's are nearly identical with those exceptions – other than standard equipment as described earlier.

It would be incorrect in these model and time comparisons (that is, TR7 compared to the TR7A or a very early TR7 to a very late TR7) not to consider that technical updates are done with any brand or model of radio without announcement. So, it is incorrect, across the board, to assume that an early serial number TR7 is the performance equivalent of a very high number TR7 or a TR7A.

As a user of several TR7's and TR7A's in my time collecting it appears correct to look for a unit perhaps several thousand into the production cycle. But, I must also say I have known users of very low serial numbers that experience no problems. Serial numbers of the TR7 do not end and restart with the TR7A. They progress as if the model never changed from one to the other. There appear to have been 10,800 to 10,900 TR7's built with another 1,400 to 1,500 TR7A's following that. So, while TR7's in general are perhaps easy to find, it may be just as true that TR7A's are a bit rare. This is according to information on the WB4HFN website⁵.

At the time of the TR7's introduction the TR-4 series were certainly highly respected products in the marketplace. They may have been old school designs, but they worked very well and had a following that gave credit to the Drake name. To give you an idea of how Drake met that product challenge – that is, competing with its own existing reputation, here is a chart to show the differences in common specifications between the very popular TR-4 / TR-4C and the TR7 / TR7A:



Vintage Amateur Radio (cont.) de Bill Shadid, W9MXQ



Drake changed its product nomenclature with the release of the TR7. See that there is no “dash” in the model number – that it, it is TR7, not TR-7. Drake struggled with this nomenclature internally because it is not unusual to see the old “dash” appear in Drake literature and even some advertising with the TR7 or its accessories. So, where the old model was the TR-4, the new model was the TR7. Where we would see model number MN-2000 written, we see model MN2700 in the new model. This went on throughout the model line. Also, Drake had a lower cost HF transceiver (a subject for next month) called the TR5. Drake tried in many cases to show accessories that were intended for both lines by using model numbers showing both the “7” and the “5” in the number. That gave us the RV75 External VFO, the MN75 Antenna Matching Unit, the L75 Linear Amplifier, the SP75 Speech Processor, etc. But other products intended for both lines were not so marked. That would include, for instance, the L7 Linear Amplifier that worked perfectly well with the TR7 or the TR5 Transceivers. Or, similarly, the RV7 External VFO that worked with both models. It is pretty darn confusing if you ask me! (But, alas, nobody ever did ask me!)

Next month we will do a part 2 of this story with information about:

- More functional details on the TR7 line – including its conversion scheme.
- Information about the TR5 Transceiver.

A special thanks go to Bob, W9DYQ⁷, for his proof reading and reference to his very late production TR7. Bob is also owner of a fine set of Drake C-Line separates. I appreciate that you read my articles. Remember that I am open to questions and comments at my email address, W9MXQ@TWC.com.

Reference Notes:

See previous articles in the *Fond du Lac Amateur Radio Club Newsletter* about the:

- Drake TR3 and TR-4 – FDLARC Newsletter for January 2019
- Drake TR-4 and TR-6 – FDLARC Newsletter for February 2019
- Drake R-4 and T-4X – FDLARC Newsletter for March 2019
- Drake R-4C and T-4XC – FDLARC Newsletter for April 2019

Book Reference: *A Family Affair, The R. L. Drake Story*, by John Loughmiller, KB9AT. ©2000 by Loughmiller.

A small note about John Loughmiller, KB9AT. I (W9MXQ) once illustrated and did schematic diagrams for articles in *Ham Radio Magazine*. In that past life I have done such documentation for articles that Loughmiller did for that magazine.

“Antenna Matching Network” was Drake’s fancy name for Antenna Tuner.

http://www.wb4hfn.com/DRAKE/DrakeArticles/TR7_Comparison_Article/TR7_Identity-03.htm

The TR-4 Transceiver had only the 2100 Hz filter for all modes. The TR-4CW and later TR-4CW/RIT had an added, selectable 500 Hz CW Filter. The TR7 / TR7A Transceivers allowed for the SSB Filter (2300 Hz) (Standard on all models) and any of the five other (optional) filters shown up to a total of three. There are two operating TR7 Transceivers at W9MXQ plus one TR7A. One TR7 and the TR7A have optional filters including the 1800, 500, and 4000 Hz units. The other TR7 has no options installed at this time – this unadorned TR7 is the one pictured at the opening of this article.

Bob, W9DYQ, and I have had a strong personal, radio, and family relationship for most of our adult lives. We collect vintage radios in tandem and openly share items that, at any one time, seem of most interest to one or the other of us. Bob, and is XYL, Deb, KAØPBV, are accomplished CW DX’ers. During our much too infrequent visits together, I am sure my non-ham XYL, Jean, feels she is soundly outnumbered! At least at my QTH, there are no arguments over who gets access to the radio! Adding to this closeness, my early career work was with Bob’s father, Ted, the original W9DYQ. My XYL, Jean, worked with Bob’s mother, Elizabeth, for many years.



FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —



VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020

Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

MEETING MINUTES

FOND DU LAC AMATEUR RADIO CLUB

Minutes of FDLARC Monthly Meeting

Monday, November 11, 2019

Meeting
Minutes



Call to Order

The meeting was called to order at 7:00 pm with president Buddy Larson KC9UVJ presiding.

Program: none

All attendees introduced themselves.



Approval of Meeting Minutes:

A motion to approve the August minutes was made by Paul Bleuel KC9NAA and seconded by Lloyd Vandervort N9RPU. The motion carried unanimously via a voice vote.

Treasurer's report

The Treasurers Report was presented by Doug Schultz N9EZF.

A motion to approve the Treasurers Report was made by Paul Bleuel KC9NAA and seconded by Justin Buell KC9YET. The motion carried unanimously via a voice vote.

A motion was made to pay the bills by Tom Karrmann KC9VZY and seconded by Tom Powell KC9VXR. The motion carried unanimously via a voice vote.

Truck Fund	0.0
Emerg. Services Fund	1,488.49
General Use Fund	6,100.58
Savings Account	25.00
Petty Cash Fund	19.12
Total	7,633.19
Repeater Fund	232.66



New Business:

The Christmas Party date has been moved to Dec 15, 2019. The price will be \$22 per person. The party will start from 5-6 pm with a social hour at Jim and Linda's Supper. Buddy Larson will post the sign up form on line. Door prizes will be two \$50 and four \$25 gift cards from HRO Milwaukee. A motion was made for the door prizes was made by Jack Heil KG9IN and seconded by Ron Keller KC9YV. The motion carried unanimously via a voice vote. Doug Schultz N9EZF will order the gift cards from H.R.O.

Jack Heil KG9IN mentioned that we will need someone to bring the SPAM for the gift swap.

Tom Powell KC9VXR suggested that we should bring donations of non perishable foods for the food shelter.

The Christmas parade will be on Dec th 1:30 – 5pm





FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —



VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020

Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

MEETING MINUTES

FOND DU LAC AMATEUR RADIO CLUB Minutes of FDLARC Monthly Meeting Monday, November 11, 2019



Nomination for officers for 2020

President: Tom Karrmann KC9VZY

Vice President: Tom Powell KC9VXR

Treasurer: Doug Schultz N9EZF

Secretary : Lloyd Vandervort N9RPU

Sgt at arms: Paul Bleuel KC9NAA

Board member: Cully Kowal KS0D , Justin Buell KC9YET

A motion was made to close nominations was made by Jack Heil KG9IN and seconded by Tom Powell KC9VXR. The motion carried unanimously via a voice vote.



A ballot was taken to determine board member.

Justin Buell KC9YET won the ballot to be board member.

Election results:

President: Tom Karrmann KC9VZY

Vice President: Tom Powell KC9VXR

Treasurer: Doug Schultz N9EZF

Secretary : Lloyd Vandervort N9RPU

Sgt at arms: Paul Bleuel KC9NAA

Board member: Justin Buell KC9YET



A motion was made to approve the new officers was made by Lloyd Vandervort N9RPU and seconded by Paul Bleuel KC9NAA . The motion carried unanimously via a voice vote

Adjournment

A motion was made to adjourn by Peter Fox KB9WZD and was seconded by Jack Heil KG9IN . The motion carried unanimously via a voice vote and the meeting was adjourned at 7:46pm.

Raffle #555216 Dick Finn KC9zvw



FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —



VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020

Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

NOTICES/ANNOUNCEMENTS

FDLARC On YouTube



Many of you may not be aware, but Lloyd Vandervoort N9RPU, our Club Secretary, has been making videos of the presentations at our meetings. There is now a pretty large collection of them on You Tube. Do yourself a favor and take a few minutes to scan the list and play some of them. Enjoy!

FARC - W3AO Field Day Presentation <https://youtu.be/UK1A47pNKyo>

FARC - Bob Heil Ham Radio Presentation https://youtu.be/t3Ueh9IN5_U

FARC - WWV Presentation https://youtu.be/w3-DP9DEv_U

FARC - Pacific Antenna Talks Kit Building <https://youtu.be/SBReL2YIsn0>

FARC - Scanner Master Presentation <https://youtu.be/dlSIAufGkv8>

FARC - WBAY Field Trip TV Nov 17 2015 <https://youtu.be/sfQvJ1fV6eo>

FARC - WBAY transmitter tour https://youtu.be/NnZ21O_6HvA

FARC - NooElec https://youtu.be/s_pxYkH4xds

FARC - Elecraft Radio <https://youtu.be/3Ou1Qpx9Vg8>

FARC - Ed Tobias & Morse Code <https://youtu.be/9uu4PFMrH2U>

FARC - Salvation Army Emergency Communications <https://youtu.be/oxXoZjuTTNE>

FARC - KFIZ Interview <https://youtu.be/UVFMCvRGEJE>

FARC - HAARP Presentation <https://youtu.be/cdeNXLMuyEE>

FARC - The DZKit Ham Radio Kits https://youtu.be/giZcfQW_tpA

FARC - The DZKit Ham Radio Kits https://youtu.be/giZcfQW_tpA

FARC - The Christmas Island DXpedition with Bill Kendall (4/9/18) <https://youtu.be/XgjYL0vAhlw>

FARC - Restoring Old Antique and Classic Radios (5/17/19) <https://youtu.be/3l352v4gYdw>

FARC - Dave Sumner K1ZZ, Secretary of the IARU (1/14/19) <https://youtu.be/fVzhzhUpYlw>

Newsletter Back Issues

When I took over as the newsletter editor I simply continued the volume numbering that existed then. Unfortunately, I don't have copies of those old newsletters. I would appreciate it if you have any newsletters earlier than October, 2014 you would send them to me. Electronic copies are ideal but I would also be pleased to accept hard copy. I'll scan them and return the originals to you.

Many Thanks, Dick Finn KC9ZVW



FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —

VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020



Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

NOTICES/ANNOUNCEMENTS

Annual Dues Are Due

As a reminder, our annual dues are now up for renewal. The cost is still a low \$15.00. You can pay your dues at the monthly meeting or mail them to:

**Fond du Lac Amateur Radio Club, Inc.
PO Box 53
Fond du Lac, WI 54936-0053**

Generally speaking, I will be publishing the newsletter each month (except December (when we do not have a meeting) on the Monday before our monthly meeting. I start assembling it during the preceding two weeks. Obviously I would like to have the material as early as possible but the deadline will have to be on the Wednesday preceding the publish date.

Following are the pertinent dates I'll update this table and print it in each month's newsletter):

	Publish Date	Deadline Date
Jan. 2020	1/6/20	12/30/20
Feb. 2020	2/10/20	2/3/20
Mar. 2020	3/2/20	2/24/20





FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —

VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020



Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

Free, For Sale or Wanted

**Upcoming HAMFESTS and Conventions
From ARRL**

Hamfests



04/18/2020 | Madison Hamfest

Location: Stoughton, WI

Type: ARRL Hamfest

Sponsor: Madison Area Repeater Association

Website: <http://www.w9hsy.org>

Learn More





FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —



VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020

Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

2020 CALENDAR

Jan. 13, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC O-103.
235 N National Ave, Fond du Lac, WI 54935

Feb. 10, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC O-103.

Feb. 15, 2020

License Exams, 9:00 am-Noon, Moraine
Park Technical College in Room C-002
Contact: Doug Schultz N9EZF



Mar. 15 & 16, 2020

Wisconsin QSO Party



Mar. 9, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC O-103.
Annual Membership Drive-Contact Joe Scheibinger
235 N National Ave, Fond du Lac, WI 54935

Apr. 13, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC O-103.
235 N National Ave, Fond du Lac, WI 54935

Apr. 18, 2020

License Exams, 9:00 am-Noon,
Moraine Park Technical College in Room C-005
235 N National Ave, Fond du Lac, WI 54935
Contact: Doug Schultz N9EZF



May 11, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC
O-103.
235 N National Ave, Fond du Lac, WI 54935

May 15—17, 2020

Dayton HAMFEST

May tbd, 2020—June tbd, 2020

Brat Fry Country Corners Exxon Station,
Hwy 67 and Hwy 41 in Lomira. 8:00am to
5:00pm—Contact: Doug Schultz N9EZF



June 8, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC O-103.
235 N National Ave, Fond du Lac, WI 54935

June 12—14, 2020

Walleye Weekend. Contact Joe Scheibinger K8VY

June 27 & 28, 2020

ARRL Field Day, 1800 UTC Saturday and
running through 2059 UTC Sunday



July 13, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC O-102.

July 19, 2020

RMC Triathlon



Aug. 10, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC O-103.
235 N National Ave, Fond du Lac, WI 54935

Aug. 23, 2020

Race the Lake

August tbd, 2020

Brat Fry Country Corners Exxon Station,
Hwy 67 and Hwy 41 in Lomira. 8:00am to
5:00pm—Contact: Doug Schultz N9EZF



Sept. 14, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC O-103.
235 N National Ave, Fond du Lac, WI 54935

Sept. 18—20, 2020

Fox Cities Marathon



Oct. 12, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC O-103
235 N National Ave, Fond du Lac, WI 54935

Oct. 10, 2020

License Exams, 9:00 am-Noon, Moraine
Park Technical College in Room C-005.
235 N National Ave, Fond du Lac, WI 54935
Contact: Doug Schultz N9EZF



Nov. 9, 2020

FDLARC Monthly Meeting, 7:00 pm, MPTC O-103.
235 N National Ave, Fond du Lac, WI 54935
Election of 2020 Officers

Dec. 5, 2020

FdL Parade of Lights, 4:00, Downtown

Dec. tbd, 2020

FDLARC Holiday Party: Jim and Linda's
Contact Buddy Larson KC9UVJ

Dec. 12, 2020

License Exams, 9:00 am-Noon, Moraine
Park Technical College in Room C-005
235 N National Ave, Fond du Lac, WI 54935
Contact: Doug Schultz N9EZF





FOND DU LAC AMATEUR RADIO CLUB

— FDL 73 —

VOLUME 21 ISSUE 1

www.fdlhams.com January, 2020



Join Us On Sunday Evenings For Our Weekly Net — 1930 hrs. 145.430 MHz — Tone 97.4 Hz

First	Last	Call Sign
Annika	Kreis	
Barbara	Simon	W9MER
Ben	Haack	KD9LVQ
Blend	Bowen	KC9VXV
Brad	Freund	KC9QYP
Brian	Turkiewicz	KC9LFR
Buddy	Larson	KC9UVJ
Chuck	Mahnke	K9HXI
Cully	Kowal	KS0D
Danny	Vandekolk	KC9IGD
Dave	Witt	WD9W
David	McCumber	N9WQ
David	Zittlow	K9DUI
Dawn	Krause	KD9CAW
Dean	Choate	KC9TGM
Debra	Florian	
Dennis	Paulin	KB9OFM
Derek	Giese	KD9IAN
Dick	Finn	KC9ZVW
Don	Chapman	KC9KZQ
Donald	Bakke	KD0HCW
Donna	Blend	KC9TFN
Dot	Olig	K9FDL
Doug	Murray	KC9ZVT
Doug	Wagner	KC0RNS
Doug	Schultz	N9EZF
Ed	Beltz	N9PJQ
Ed	Sipple	W9VYO
Ed	Steinfeld	KB1ZJK
Fernando	Salazar	KC9ZVX
Gene	Olig	KD9ZP
Gene	Peterson	KD9IAG
Gerry	Radtke	WA9GON
Gregory	Schmude	KD9EHB
Isaac	Lundberg	KD9FPG
Jack	Heil	KG9IN
James	Scovronski	N9WAM
Jeremiah	Alderden	KC9SGL
Jim	Balthazor	K9AIX
Jim	Cole	N9WAP
Joe	Lauber	KC9MDY
Joe	Scheibinger	K9VY
Joyce	Keyes	KC9KIJ
Justin	Buell	KB9YET
Kirk	Everson	KC9FZE
Kyle	Ruesch	AB9AX
Larry	Lamont	KB9POP
Larry	Mielke	KC9RUE
Laura	Yates	
Laurie	Winchell-Beltz	KC9YQS
Lloyd	Vandervort	N9RPU
Lorelei	Kreis	
Louis	Simon	KB9VQM
Marjean	Buck	KC9LFI
Marjorie	Heil	KC9BEN
Mark	Forss	WD9CYM
Mathew	Yates	KD9CSD
Matt	Nett	KD9BBN
Matthew	Zimmerman *	KD9KTY
Michelle	Lawrence	N9RQL
Mike	Keyes	KE7ES
Mike	Lawrence	N9UA
Nancy	Myers	K9ANA
Neal	Buck	KC9LFN
Paul	Bleuel	KC9NAA

CLUB ROOSTER



Paul	Tvrdy	N9KLK
Peter	Fox	KB9WZD
Randy	Nelson	KC9MYG
Ray	Grenier	K9KHW
Reinholt	Aschmotat	N8VDH
Richard	Jarzynka	KD9EMX
Rick	Robinson	NI9Z
Ron	Keller	KC9YVL
Scott	Kreis	
Stan	Cram	AI0M
Steve	Smith	W9GPI
Ted	Gustavus	KD9IAH
Ted	Neuburg	W9LUQ
Ted	Willett	W9NHE
Timothy	Braun	W9AAV
Todd	Beay	AC9EX
Tom	Karrmann	KC9VZY
Tom	Murray	N0HOR
Tom	Powell	KC9VXR
Tony	Pass	KC9QYR
Walter	Rueger	KC9WQ
Walter	Drees	KD9JAD

Paul	Tvrdy	N9KLK
Ed	Beltz	N9PJQ
Lloyd	Vandervort	N9RPU
Michelle	Lawrence	N9RQL
Mike	Lawrence	N9UA
James	Scovronski	N9WAM
Jim	Cole	N9WAP
David	McCumber	N9WQ
Rick	Robinson	NI9Z
Timothy	Braun	W9AAV
Steve	Smith	W9GPI
Ted	Neuburg	W9LUQ
Barbara	Simon	W9MER
Ted	Willett	W9NHE
Ed	Sipple	W9VYO
Gerry	Radtke	WA9GON
Mark	Forss	WD9CYM
Dave	Witt	WD9W
Annika	Kreis	
Debra	Florian	
Laura	Yates	
Lorelei	Kreis	
Scott	Kreis	

First	Last	Call Sign
Kyle	Ruesch	AB9AX
Todd	Beay	AC9EX
Stan	Cram	AI0M
Jim	Balthazor	K9AIX
Nancy	Myers	K9ANA
David	Zittlow	K9DUI
Dot	Olig	K9FDL
Chuck	Mahnke	K9HXI
Ray	Grenier	K9KHW
Joe	Scheibinger	K9VY
Ed	Steinfeld	KB1ZJK
Dennis	Paulin	KB9OFM
Larry	Lamont	KB9POP
Louis	Simon	KB9VQM
Peter	Fox	KB9WZD
Justin	Buell	KB9YET
Doug	Wagner	KC0RNS
Marjorie	Heil	KC9BEN
Kirk	Everson	KC9FZE
Danny	Vandekolk	KC9IGD
Joyce	Keyes	KC9KIJ
Don	Chapman	KC9KZQ
Marjean	Buck	KC9LFI
Neal	Buck	KC9LFN
Brian	Turkiewicz	KC9LFR
Joe	Lauber	KC9MDY
Randy	Nelson	KC9MYG
Paul	Bleuel	KC9NAA
Brad	Freund	KC9QYP
Tony	Pass	KC9QYR
Larry	Mielke	KC9RUE
Jeremiah	Alderden	KC9SGL
Donna	Blend	KC9TFN
Dean	Choate	KC9TGM
Buddy	Larson	KC9UVJ
Tom	Powell	KC9VXR
Blend	Bowen	KC9VXV
Tom	Karrmann	KC9VZY
Walter	Rueger	KC9WQ
Laurie	Winchell-Beltz	KC9YQS
Ron	Keller	KC9YVL
Doug	Murray	KC9ZVT
Dick	Finn	KC9ZVW
Fernando	Salazar	KC9ZVX
Donald	Bakke	KD0HCW
Matt	Nett	KD9BBN
Dawn	Krause	KD9CAW
Mathew	Yates	KD9CSD
Gregory	Schmude	KD9EHB
Richard	Jarzynka	KD9EMX
Isaac	Lundberg	KD9FPG
Gene	Peterson	KD9IAG
Ted	Gustavus	KD9IAH
Derek	Giese	KD9IAN
Walter	Drees	KD9JAD
Matthew	Zimmerman *	KD9KTY
Ben	Haack	KD9LVQ
Gene	Olig	KD9ZP
Mike	Keyes	KE7ES
Jack	Heil	KG9IN
Cully	Kowal	KS0D
Tom	Murray	N0HOR
Reinholt	Aschmotat	N8VDH
Doug	Schultz	N9EZF
Paul	Tvrdy	N9KLK

NAME
SORT

CALL
SORT