



## FOND DU LAC AMATEUR

WWW.FDLHAMS.COM

FEBRUARY, 2021

JOIN US ON SUNDAY EVENINGS FOR OUR WEEKLY NET  
1930 HRS - 145.430 MHZ - TONE 97.4HZ

Wisconsin QSO is still on for March and check out the little history and explanation of the event. The musical wireless telegraph. What you may ask is that? Well read on to find out more about this great piece of amateur radio history.

Reminder that annual club dues of \$15 should be mailed to

Fond du Lac Amateur Radio Club  
P.O. Box 53  
Fond du Lac, WI 54935

Stay safe and stay connected.

Tim Braun W9AAV



### INSIDE THIS ISSUE

February Meeting Minutes .....	2
February Treasurer's Report .....	3
WI QSO Party Announcement .....	4
Musical Wireless Telegraph .....	5
Calendar of Events .....	8
Club Roster .....	9

### NEXT MEETING

#### When:

March 9, 2021 at 7:00 PM

#### Where:

**To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater**

**145.430 MHZ Tone 97.4 HZ**

# OCTOBER MEETING MINUTES

## Fond du Lac Amateur Radio Club

Monday February 8, 2021

LLOYD VANDERVORT

SECRETARY



### 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

KB9YET

Called to order 7pm Kc9VXR presiding

Member check-ins :

KC9VXR, W9LUQ, N9WQ (T), KB9WZD, KB9WKM, KC9YVL, N9EZF (B), N9RPU, KD9IAG .

KC9VXR: Is there any discussion or approval of last months minutes ?

KC9YVL: I make a motion to approve last months minutes.

N9RPU: I second that motion.

KC9VXR: Is there any discussion ? None therefore the motion passes unanimous consent.

KC9VXR: N9EZF treasures report, and one bill to pay .

KC9VXR: Is there a motion to approve the treasures report ?

KC9YVL: I make a motion to approve the treasures report .

N9WQ : I second that motion.

KC9VXR: Is there any objections or discussion ? None therefore the motion passes unanimous consent.

KC9VXR: Is there a motion to pay the bill ?

N9RPU: I make a motion to pay the bill .

KC9YVL: I second that motion.

KC9VXR: Is there any objections or discussion ? None therefore the motion passes unanimous consent.

KC9VXR: N9EZF you may present your business .

N9EZF : After June 29 2021 the FCC requires an email address on any communications with them ,

If you do not have an email address you can have a relative or friend do this for you.

Also the FCC now requires #35 for license renewals or applications.

KC9VXR: Is there any old business ? None , Any new business ?

N9WQ : Is there any discussion on the truck ? Replacement or a trailer ? He is interested in a truck to pull his race car .

KC9VXR: Is there any discussion on this ?

N9RPU: We have a truck committee that should decide this.

KC9VXR: Do you have a list of who is on the committee ?

N9RPU: I will see if i can find the list of the committee .

KC9VXR: Is there any other business ?

KC9YVL: The upcoming WIQSO PARTY , does anyone have an idea how the club cab get together on this ?

N9WQ : Traditionally our club was 1st 2nd or 3rd in this contest , we didn't have a lot of operators but we got together and did very well.

It was suggested that we get together with another club to do this . I think we should get our own club together and do this.

I noticed that I was the number one operator in the club last year. We should get together and win this.

KC9VXR: Is there any comment or discussion on this ?

N9RPU: In the past we had someone to consolidate the scores and submit them .

N9WQ : Historically we had Randy KB9KEG do this ,If every one sent there cabrillo files to me I can send them in .

N9RPU: That sounds like a good idea.

KC9VXR: I seem to remember that there were some people that were not real active in the club that added their scores to our club.

N9EZF : In the years past we had some members that were testers that added to our scores that are now long gone.

KC9VXR: Any one else ?

KC9YVL: The software (n3fjp) that we used i think we had a club password .

N9RPU: I will see if i can find the password.

KC9YVL: See if we can get this before the contest .

N9EZF : The n3fjp log is free up to 30 contacts then you have to pay \$8 to continue .

KC9VXR: I have an old copy on my computer do i have to update ?

N9EZF : The only time you have to update is if they change something or the rules. The newest version is ver 4.4 .

KC9VXR: The West Allis club has an introductory program on the WIQSO Party that we could run before our next meeting. Any comments ?

N9WQ : does everyone have a copy of the N3FJP software ? I have a copy .

KC9VXR: Its a free download on line.

KC9YVL:The march meeting is on th 8th and WIQSO is on the 14th.

KC9VXR: the West Allis program would be a ZOOM meeting.

KC9VXR: Any other comments or discussions ?

KC9VXR: Hearing none is there a motion to adjourn ?

N9WQ : I make a motion to adjourn.

KC9YVL: I second that motion.

KC9VXR: Any other comments or discussions ? None

KC9VXR: The meeting in adjourned at 1:27 pm

## FEBRUARY TREASURER'S REPORT

DOUG SCHULTZ

TREASURER



The Treasurers Report is presented by Doug Schultz N9EZF.

	Previous Month	Income & Expenses	Current Total
<b>FDL RADIO CLUB</b>			
<b>Truck Fund</b>	0.00	0.00	0.00
<b>Emergency Svc Fund</b>	1,495.69	0.00	1,495.69
<b>General Use Fund</b>	4,947.53	65.00	5,012.53
<b>Savings Account</b>	25.00	0.00	25.00
<b>Petty Cash Fund</b>	19.12	0.00	19.12
<b>TOTALS</b>	<b>6,487.34</b>		<b>6552.34</b>

<b>FDL REPEATER ASSN.</b>			
<b>Repeater Fund</b>	235.06	0.00	235.06
<b>TOTALS</b>	<b>235.06</b>		<b>235.06</b>

\* Corrected to match checking account statement

	Cash	Savings Account	Checking Account	CD	Other
<b>FDL RADIO CLUB</b>					
<b>Truck Fund</b>			0.00		
<b>Emergency Svc Fund</b>			1,032.52	463.17	
<b>General Use Fund</b>			3,826.20	1,186.33	
<b>Savings Account</b>		25.00			
<b>Petty Cash Fund</b>	19.12				
<b>Repeater Fund</b>			81.97	153.09	
	<b>19.12</b>	<b>25.00</b>	<b>4,940.69</b>	<b>1,802.59</b>	

### Income

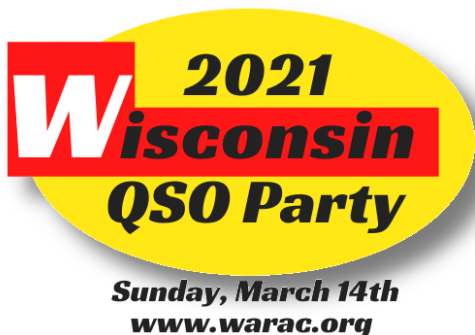
Dues	65.00
<b>TOTAL</b>	<b>65.00</b>

### Expenses

	<b>0.00</b>
--	-------------

### Bills Needing Approval to Pay & Action Required

Incorp. Renewal	10
	<b>10.00</b>



## WISCONSIN QSO PARTY MARCH 14, 2021 & MARCH 25, 2021

In last month's club newsletter we discussed the rules regarding the 2021 Wisconsin QSO Party. In this newsletter I want to give some more observations about the Wisconsin QSO Party. I have been participating in the Wisconsin QSO Party since 1986 and it is one of my favorite contests during the year. I can remember the first WI QSO party I participated in on 40 meters in 1986 I could not believe the number of stations that wanted to work me since I was one of the few stations operating from Fond du Lac county. My station was a Kenwood TS-530 SP 100 watt rig and 40 meter wire inverted vee at 25 feet at that time.

You don't need high power and a great antenna to work this contest. A Technician can work 2 meter simplex and 70 cm. simplex to get involved in the contest. On the HF bands 40 meters and 80 meters are the primary bands during the low sunspot years. Last year I found I could work Wisconsin stations on 80 meters before 2:00 PM and they got stronger as the day went on. The 40 meter band was a little long for Wisconsin stations but there are plenty of other stations from out of state that also will participate in the Wisconsin QSO party. Since the object of the contests is to work as many counties, states and provinces to increase your number of multipliers which will increase your contest score. I have found you will also be able increase your number of states by working the contest on 20 meters for short periods. It is a fun contest since it only is only 7 hours long and it's great practice for participating in ARRL Field Day contest in late June.

I would definitely recommend using the N3FJP WI QSO Party logging software in the contest. It makes logging easy and submitting your entry electronically as straight forward as can be.

If anyone has any questions about working the contest they can contact me at 922-3088.

### 2021 WISCONSIN QSO PARTY RULES

Stations anywhere contact Wisconsin stations for points. Wisconsin stations contact stations anywhere for points. Everybody has fun!

March 14, 2021 from 1800Z to 0100Z March 15 (1:00PM CDT to 8:00PM CDT )

*Note: This is the first day of Daylight Savings Time!*

CW and Phone. Digital is counted as CW. FT8/FT4 QSO's are not accepted. All stations may be worked once per mode on each band. Cannot work the same station on CW and Digital on the same band.

Mobiles and portables may be worked once per mode per Wisconsin county that they operate from. Mobiles or portables may not sit on a county line. Drivers may navigate and drive – any other assistance must be considered multi-op.

Spotting may be used but self-spotting is not allowed.

Stations operated remotely will be considered pre-existing Portables (not eligible for Bonus points). The transmitter location must be given as the sent exchange.

For full rules visit [https://www.warac.org/wqp/wiqp\\_rules.htm](https://www.warac.org/wqp/wiqp_rules.htm)



# The Murgas Amateur Club Special Event Station



## K3M

Commemorating the 115<sup>th</sup> Anniversary

Of the  
Two-Way Long-Distance  
Wireless Communication Overland

On

**November 23, 1905**

between

Wilkes-Barre, PA & Scranton, PA

Reverend Joseph Murgaš  
1864-1929



The man who made  
amateur radio  
communications  
possible.

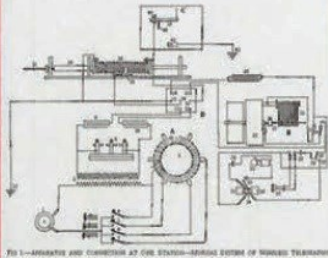
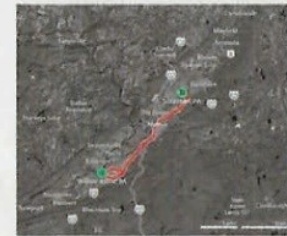


FIG 1—APPARATUS AND CONNECTION AT ONE STATION—ORIGINAL SYSTEM OF WIRELESS TELEGRAPHY

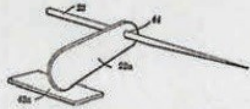


FIG 2—THE IMPERFECT CONTACT. MURGAŠ SYSTEM OF WIRELESS TELEGRAPHY

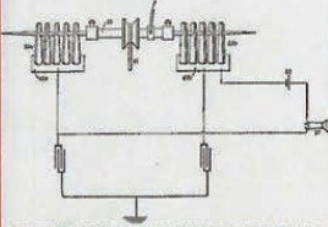


FIG 3—ARRANGEMENT OF THE APPARATUS. MURGAŠ SYSTEM OF WIRELESS TELEGRAPHY

**CONFIRMS CONTACT WITH:  
KC8T**

DATE			UTC	MHz	RST	Mode
DAY	MONTH	YEAR				
15	NOV	2020	00:38	3.754	-06	FT8

[www.murgasarc.org](http://www.murgasarc.org)

The special event certificate is loaded with visual information about Father Jozef Murgaš' invention and achievement.

(Republished with permission from the February 2021 issue of Avionics News magazine, a monthly publication of the Aircraft Electronics Association.)

## Musical Wireless Telegraph By Thomas Inman

Here we are in February, and most of us are trying to stay warm and healthy. One indoor activity enjoyed by many, including me, is amateur radio. Last fall, I made contact with a most unusual station. As a result, I learned about one of the lesser-known pioneers of radio, Father Jozef Murgaš.

The three-character call sign (K3M) was a clue there was something special about this station. A quick online search led me to the Murgas Amateur Radio Club of Wilkes-Barre, Pennsylvania. The station I reached was created to commemorate the 115th anniversary of a frequency shift keyed transmission between Wilkes-Barre and Scranton over a distance of 19 miles. Of course, Murgaš didn't call the transmission mode FSK, and it would be many years before engineers developed various forms of digital transmissions. Still, it could be said the priest was well ahead of his time.

In 1905, radio was just getting started. The first radio signals across the ocean occurred only six years before. The first transoceanic radiotelegraph signal had been sent only four years earlier. The year before, Guglielmo Marconi had been awarded a patent for his wireless signaling system, and John Ambrose Fleming had been awarded a patent for a vacuum tube diode. Now, we associate speed with bandwidth. In the late 19th and early 20th centuries, frequency control was marginal. As a result, the bandwidth requirement was large in spite of the slow speed of information flow. The year Murgaš conducted his experiment, Morse code could only be transmitted about 15 words per minute via radio.

Murgaš was born in today's Slovakia. At the time, the area was within the Kingdom of Hungary in the Austrian Empire. Ordained in 1888, Murgaš studied art and physics. In 1896, Murgaš became the priest for a Slovak parish in Wilkes-Barre, Pennsylvania, which at the time was a relatively new town. The church is still active. In Wilkes-Barre, he continued his studies in electricity and in electromagnetic waves. In 1903 and early 1904, Murgaš received two patents. The first was a new radio wave detector. The second was for a two-tone system for transmitting Morse code signals.

He called the latter the Musical Wireless Telegraph System. Instead of dots and dashes, the system sent two equally timed tones of different frequencies. One tone represented dots, and the other tone represented dashes. The result was the ability to communicate using Morse code at a rate of 50 words per minute, nearly three times faster than the Marconi system.

By 1905, Murgaš was ready to demonstrate his system. In the preceding months, a partner, Universal Aether Telegraph Co., financed the construction of two enormous towers. Constructed of pine and steel, these towers stood 150 feet high. Each tower resembled a closely spaced pair of oil drilling rigs with a bridge between them at approximately 100 feet. One tower was constructed on a hill behind the Sacred Heart Slovak Church in Wilkes-Barre. The tower dwarfed all other town structures. A second tower was constructed just south of Scranton on a hill in an area now known as East Mountain.

On Nov. 23, 1905, representatives of the Navy, University of Pennsylvania, Universal Aether Telegraph Co, the Catholic Church, and the mayor of Wilkes-Barre joined Murgaš and telegrapher Gideon Shadle of the Scranton Times in the radio room connected to the tower in Wilkes-Barre. At the Scranton tower, several were present, including representatives of Scranton, the county, United State Department of State, and the Universal Aether Telegraph Co, along with the mayor of Scranton.

At 2 p.m., the telegraphers sent messages back and forth between the mayors at a rate of 45 words per minute. At the time, this was considered a significant achievement. Remember, in the early 1900s, everything about radio was new. Successful transmission of signals across an ocean didn't necessarily mean signals would travel as far over land. A demonstration of radio signals from an aircraft wasn't made until 1910.

In the early portion of the 20th century, Morse code was well established and was a reliable way of transmitting information. Thus, adapting FSK to Morse seemed a logical thing to do. The "musical" system of transmission didn't return until the digital age, when one tone would be used for a logic "0," and the other tone would be used for a logic "1." Bell Telephone brought FSK back for its voice band digital modem in 1962. The Bell system worked at 300 baud and was full duplex, meaning simultaneous transmitting and receiving.

Today, there are almost countless ways to send information by radio, and we can do so without huge antennas. In our program at Pennsylvania College of Technology, we teach AM and FM, of course. The students also learn about FSK and phase shift keying. In addition, students learn about spread spectrum and multiplexing techniques. Since VHF navigation systems use a subcarrier to transmit a reference signal, students end up learning about subcarriers, too. Since we have students for only a limited time, we don't have time to teach all the details of various different types of PSK and FSK. A quick count of the modes available within two popular software systems for amateur radio digital transmissions yields 154 possible digital modes. Some, like radio teletype, aren't so much different from the Murgaš technique.

Measuring using today's system, the baud rate for Murgaš' transmission was approximately 37.35, and of course, Marconi's system was even slower. The original dial-up modems from the 1970s were 110 baud. Current Wi-Fi sensors can reach speeds as high as 921,600 baud. So Murgaš' system was not very fast, but still, the musical wireless telegraph system was a breakthrough. I was in contact with K3M using FT8, a frequency shifting system using eight closely spaced frequencies, which take up a bandwidth of 50 Hz. Like Murgaš' system and the Marconi radio telegraph system, FT8 doesn't send a lot of information in a short time. Instead, it sends just enough information to establish contact, and in my case, earn a certificate.

## 2021 CALENDAR OF EVENTS

### January 11, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### February 08, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### March 8, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### March 14 & 15, 2021

Wisconsin QSO Party



### April 12, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### May 10, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### June 8, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### July 12, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### August 09, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### September 13, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### October 11, 2021 9:00 AM - Noon

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### November 8, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ

### December 13, 2021 7:00 PM

FDLARC Monthly Meeting  
To adhere to social distancing guidelines, this month's meeting will be held on the air on the club's repeater 145.430 MHz Tone 97.4 HZ



# Club Roster

## 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  
 Scholarship: Jack Heil KG9IN  
 Field Day: Jack Heil KG9IN  
 Fund Raising: Open  
 Net Manager: Doug Schultz N9EZF  
 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



First Name	Last Name	Call Sign	First Name	Last Name	Call Sign
Dave	Witt	WD9W	Ben	Haack	KD9LVQ
Blend	Bowen	KC9VXV	Don	Chapman	KC9KZQ
Kirk	Everson	KC9FZE	Tom	Karmann	KC9VZY
Nancy	Myers	K9ANA	Rick	Robinson	NI9Z-SK
Randy	Nelson	KC9MYG	Fernando	Salazar	KC9ZVX
Matt	Nett	KD9BBN	Larry	Mielke	KC9RUE
Walter	Rueger	KC9WQ-SK	Doug	Murray	KC9ZVT
Gregory	Schmude	KD9EHB	Larry	Lamont	KB9POP
Ed	Steinfeld	KB1ZJK	Jim	Cole	N9WAP
Doug	Wagner	KC0RNS-SK	Reinholt	Aschmotat	N8VDH
Donna	Blend	KC9TFN	Ed	Beltz	N9PJQ
Dean	Choate	KC9TGM	Laurie	Winchell-Beltz	KC9YQS
Gerry	Radtko	WA9GON	Paul	Bleuel	KC9NAA
Danny	Vandekolk	KC9IGD	Peter	Fox	KB9WZD
Mathew	Yates	KD9CSD	Justin	Buell	KB9YET
Laura	Yates		Marjorie	Heil	KC9BEN
Stan	Cram	AI0M	Jack	Heil	KG9IN
Mark	Forss	WD9CYM	Buddy	Larson	KC9UVJ
Derek	Giese	KD9IAN	Cully	Kowal	KS0D
Richard	Jarzynka	KD9EMX	Jim	Balthazor	K9AIX
Joyce	Keyes	KC9KIJ	Frank	D'Imperio	KD9OXO
Mike	Keyes	KE7ES	Jeremiah	Alderden	KC9SGL
Scott	Kreis		Walter	Meyer	K9WKM
Lorelei	Kreis		Doug	Iverson	AC9XW
Annika	Kreis		Gene	Peterson	KD9IAG
Isaac	Lundberg	KD9FPG	Lloyd	Vandervort	N9RPU
Tom	Murray	N0HOR	Marjean	Buck	KC9LFI
Ed	Sipple	W9VYO	Neal	Buck	KC9LFN
Brian	Turkiewicz	KC9LFR	Ron	Keller	KC9YVL
James	Scovronski	N9WAM	Paul	Tvrdy	N9KLK
Mike	Lawrence	N9UA	Joe	Lauber	KC9MDY
Michelle	Lawrence	N9RQL	Dawn	Krause	KD9CAW
Matthew	Zimmerman *	KD9KTY	Joe	Scheibinger	K9VY
Ted	Gustavus	KD9IAH	Ray	Grenier	K9KHW
Dot	Olig	K9FDL	Ted	Willett	W9NHE
Gene	Olig	KD9ZP	Dick	Finn	KC9ZVW
Todd	Beay	AC9EX	Chuck	Mahnke	K9HXI
Kyle	Ruesch	AB9AX	Tom	Powell	KC9VXR
Walter	Drees	KD9JAD	Doug	Schultz	N9EZF
Debra	Drees		Dennis	Paulin	KB9OFM
Brad	Freund	KC9QYP	Tony	Pass	KC9QYR
Louis	Simon	KB9VQM	David	Zittlow	K9DUI
Barbara	Simon	W9MER	Raymond	Teschke	KD9QLE
Donald	Bakke	KD0HCW	Robert	Burrier	N2TSQ
Ted	Neuburg	W9LUQ	Brad	Gehrt	KA9JDE
David	McCumber	N9WQ	Steve	Smith	W9GPI