

- FDL 73 -

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August 2022

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

Tone 97.4 Hz





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

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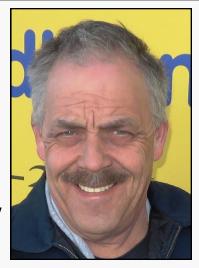
Newsletter Submissions:
Please email Editor Doug Schultz N9EZF
schultz74@charter.net

FARC FDL 73 Newsletter design and concept by Dick Finn KC9ZVW

THE PRESIDENTS CORNER

By: Dave McCumber N9WQ

HELLO EVERYONE FROM SUNNY BEAUTIFUL DOWNTOWN NORTH FOND DU LAC!



There are so many facets to Ham Radio and the list keeps growing! There are many ways to communicate as we have seen in our last meetings. Everything from Morse Code to FT-8 to moon bounce, to working the world on a hand held connected to the internet. One of the most satisfying ways to get on the air is to build something with your own hands and work another country with it. You can do that very easily by building your own antenna. Having an antenna farm is pretty cool, but building a home made antenna and sticking it in your attic and working the world with it is pretty exciting! Especially low power FT-8. At the August meeting we will meet and incredible Ham Radio enthusiast by the name of John Portune. You have read many of his articles in QST and seen him on YouTube. Come to the August meeting and bring a friend! We are only 13 new members shy of our 2020 goal! See you at the meeting.

OUR NEXT MEETING: MONDAY AUG 8TH

When: Monday August 8th, 2022 at 7:00 pm
Where: Moraine Park College (see page 2)
235 N National Ave, Fond du Lac, WI
Please Bring a Friend (or new member) to the meeting!



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ENTERIANMENT Antennas!

President's Corner by Dave McCumber
Meeting Back in our Usual Place!
The Incredible John Portune
Legacy Cores System Retired
Saying Goodbye to Member Paul Bleuel
Treasurers Report
Secretary's Report
Our Heritage Page
Upcoming Events
FARC Downloads
Membership Roster by Call Sign
Membership Application To Print Out



Moraine Park Meeting Room A-112

We will be meeting once again in the World Room at MPTC. Because of the construction, please use the main front entrance the FARC and park in the main parking lot on the south side of the school. Use the main entrance.



Official FARC Goody Table Set Up At Meeting by the Door

Back when we were meeting before Covid, we always had a table set up where you could select from some amazing things that other Ham radio operators would bring in to share. Piles of magazines, books, and even some hardware was brought in to borrow and give away. So it's time to clean out the radio shack of the accumulated stuff you don't want any more over the year of the pandemic. If you have old magazines, this is a great way to help distribute knowledge of our

great hobby! Take them home and when you are done reading them bring them back next month and put them on the table for the next ham! And if you have anything to sell, bring it and attach a note to it showing how much you want for the item and who you are. Older magazines are always welcome!

Hey FARC! How are we doing

Publication Corrections and Distribution

The "FDL 73" newsletter is compiled and distributed by the members of the Fond du Lac Amateur Radio Club. It is distributed by E-mail free of charge to all its members. Members are encouraged to send copies freely to other Ham Radio enthusiasts, electronic hobbyists, and friends. The newsletter is the heartbeat of the club and members are encouraged to participate by lending stories, experiences, and expertise. Deadline for submission is 10 days before the next advertised meeting. For corrections and submissions please send them to backstagelive@gmail.com.



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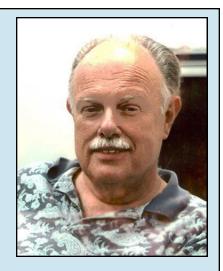
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Through Education

JOHN PORTUNE W6NBC

Ham Extraordinaire



Many of you have read his articles or seen him on YouTube. One of the most knowledgeable persons in Ham Radio will be our guest for the August meeting on Monday. Before we talk about the subject, you need to know more about this incredible Ham!

John is a native of los Angeles, CA and has been licensed as an Amateur Radio operator since 1965. He gained his Extra certificate in 1972. He also has a commercial license in General Radio Telegraph "GROL." John has been a 10 year resident of the UK with the call sign MØGCK.

John has spent his career in broadcast television. He received a Bachelor's degree in Physics from Oregon State University in 1960. He became a career (Retired) TV broadcast television engineer/instructor at KNBC Ch 4 in Los Angeles, Sony Broadcast, San Francisco.

John is a Ham magazine author publishing articles in QST (over 25 articles to date) and other publications. He gives frequent free radio club Zoom presentations for Ham Radio meetings and live at ham expos. John is active on HF, VHF, UHF – SSB, FM, digital modes, and ham satellites.

And if that isn't enough, John is interested in Steam railroading, pipe organs and is a sushi enthusiast. He is married to KF6OEB and has 3 children and 12 grandchildren.

You can reach him at jportune@aol.com, and check out his website at w6nbc.co.

How to Hide Antenna in you Attic!

It is really exciting learning how to make your own Ham Radio antenna! Yet there are people that would like to get on the air but have no place to install one due to covenants or rental agreements. Our entertainment this month will center on making your own antenna work in places you never thought of! You don't need a large antenna farm or a beam to enjoy Ham Radio! In fact sometimes it's more exciting to work with smaller homemade antennas and low power. There is lots of satisfaction working the world on a low power, low budget system. Especially if you are working the world on FT-8! See you at the meeting and bring a friend!



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Here is one of John Portune's articles written in QST magazine. John has written many articles in various radio magazines. The reason I picked this article is to showcase John's incredible talent in the field of Amateur Radio. Another reason is this would be a very cool project to put on the top of our emergency response trailer! You can make an antenna out of any metallic material that radiates even if it's copper plumbing from a hardware store! These kind of projects are so much fun and very satisfying! John will be our guest at the August meeting.



Compact 40 Meter HF Loop for Your Recreational Vehicle

Want something better than a mobile HF whip antenna while camping in an RV park? Try a tilt-up compact HF loop.

John Portune, W6NBC

ams with a motor home or a travel trailer know that achieving high efficiency in an HF RV antenna isn't easy. Most often we settle for a bumper mounted whip or screwdriver antenna. That's fine for on the road operating, but leaves room for improvement for operation while parked.

A survey of campground HF RV antennas will turn up a number of potential solutions. These include tilt-up home station type trapped multiband verticals, long wires shot over a nearby tree or pairs of mobile HF whips mounted horizontally on a mast and used as short dipoles. A much better solution, in my opinion, is to use a compact transmitting loop. They can be small enough to be easily mounted on an RV, but are more efficient than mobile HF whips. My version of such an antenna for 40 meters is shown in the title photo. I've provided design details for other bands at the end of this article.

Compact loops can also be a good choice for a home station operation if aesthetics or local rules prohibit more obvious antennas. I have a 20 meter loop hidden in a tree, a 40 meter loop on a rose trellis and a 2 meter loop disguised as a weather vane.^{1,2}

A compact loop is just a dipole made short (less than $\lambda I10$ long) then bent into an openended loop with a capacitor across the ends for tuning. Looking at it another way, a compact loop is a one turn parallel "tank circuit" big enough to radiate.

Why is it better than a typical electrical λ/4 mobile vertical HF whip? Simply stated, a compact loop or other horizontal antenna, suffers far less from ground losses. This one, modeled at 70% efficiency, is only a bit less efficient than a full-size 40 meter dipole. Comparatively, an electrical λ/4 mobile whip, such as a screwdriver antenna, for 40 meters may be only 5% efficient. Read a fuller explanation of this later in this article.

Radiation Pattern

In free space, the radiation pattern of a compact loop is like that of a $\lambda/2$ dipole lying ¹Notes appear on page 43.

along the axis of the loop with its polarization rotated 90°, in this case to vertical. As with all antennas, the ground changes the radiation pattern. Figure 1 is an *EZNEC* plot of the loop over average soil (RV on the X axis). As you can see, at this height, the loop is more or less omnidirectional, but this is also true for many 40 meters antennas at this height.

Unlike a dipole, however, there is no specified size for a compact loop. With the correct tuning capacitor across the ends, one can resonate a loop to a wide range of frequencies. This loop is roughly $\lambda/5$ in circumference. I intentionally made it larger than the classical $\lambda/10$, to improve the efficiency. In general, the bigger the loop, the lower the losses. On an RV, however, there is adequate room for a large loop. What's more, the extra size reduces the length of the coaxial tuning capacitor. The radiation pattern does skew a bit from the classical, but this is of no consequence at this height.

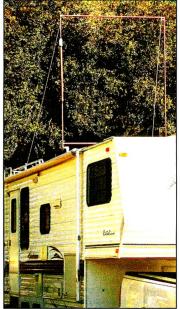
Do not mount the loop horizontally. If you do, losses may be severe. Loops do not like large objects, including the ground, broadside to the loop. Unless you can mount a compact loop high, keep it vertical.

Mechanical Details

In addition to nearby objects, the other main cause of loss in a compact loop is the resistance of its conductors and connections. Hams rarely consider skin effect but in small antennas its influence is appreciable. Compact loop designers should always pay careful attention to both the conductor size and the material used in construction in order to achieve high efficiency.

As an aside, you can estimate the real world loss in an antenna by measuring the bandwidth wherever you intend to use it and then again at the same height, but now clear of all nearby objects. In free space this loop has a theoretical bandwidth of roughly 10 kHz. On my RV it is slightly broader, indicating that the rig and the ground are to some degree lowering the efficiency.

Large diameter high conductivity tubing is mandatory. Copper is best. I use common hardware store rigid copper water pipe.



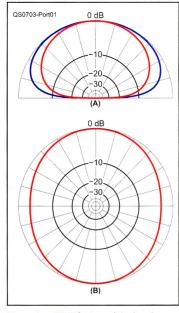


Figure 1 — EZNEC plots of the loop's pattern over average soil. At A, elevation plots in the plane of the loop (red) and at right angles (blue). At B the azimuth plot at 30° elevation.

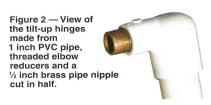


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Aluminum is noticeably poorer at nearly double the loss (roughly half an S-unit). Steel and stainless steel are terrible. Also, don't use flat strap. Skin effect in a strap pushes the RF mostly to the edges, increasing conductor resistance even more. Copper pipe, 3/4 inches in diameter, is the best compromise considering strength, cost and weight. It results in an antenna having reasonable efficiency. The use of available plumbing fittings and ordinary solder, applied with a propane torch, makes for a satisfactory assembly method.

Make the tilt-up hinges from 1 inch PVC pipe, threaded elbow reducers and a 1/2 inch brass pipe nipple cut in half as shown in Figure 2. The cut ends slip into copper elbows at the bottom of the loop to act as bearings. The normal location of this loop is on top of my RV, but I decided also to make it the same size as the bed of my 3/4 ton long bed pickup as shown in Figure 3.

Remember, a compact loop doesn't have to be a particular size. At a pickup bed size, it can be sized to mount directly in the truck's rear stake pockets. This gave me a convenient place to develop the loop as well as a way to operate it at home without the RV.

For installation on my RV, I permanently attached two $1\frac{1}{2} \times 6$ inch galvanized steel pipe nipples, as shown in Figure 4, on floor flanges to the roof. These perform the same function as the stake pockets of my pickup.

The Tuning Capacitor

I used 11/4 inch copper pipe and a 11/4 to 3/4 inch reducer for the tuning capacitor as shown in Figure 5. This permits full legal power. You will need to drill through the small end of the reducer with a 29/32 inch drill so that the capacitor can slide on the loop. Also, drill a 1/4 inch hole in the small side of the reducer and solder on a brass nut for a stainless steel locking screw. The tuning range with this capacitor is several megahertz.

The open ends of the main loop come within 3 inches of each other inside the capacitor. Maintain alignment by inserting a roughly 1 foot piece of 3/4 inch acrylic rod into the open ends of the loop. Tape or heat shrink the rod to the ends of the loop. Several Internet providers supply acrylic rod.

You will also need to stabilize the open end of the capacitor with an assembly made from a PVC pipe cap. The cap requires a 1/8 inch hole drilled in the top. Glue the assembly together with ordinary PVC cement as shown in Figure 6. A PVC cap alone is not a good idea. If moisture gets in, a pathway for



Figure 3 — The loop mounted on the bed of the author's 3/4 ton long bed pickup.

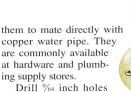
arcing will exist along the cap from the loop to the end of the capacitor. The voltage here is thousands of volts even at 100 W of transmit power. After tuning the loop, weatherproof both ends of the capacitor with tape or heat shrink tubing. The ½ to ¾ inch bushing helps you accomplish this. You should not need to readjust the capacitor after initial tuneup. Refer to the tuning section later in this article.

Feeding the Loop

There are several ways to connect to a compact loop. My preference is a tap match as shown in Figure 7. It resembles a gamma match, but is actually more like tapping an RF coil. It can be made of small diameter wire, but for rigidity I prefer 1/2 inch pipe and fittings.

By experiment, I discovered that the location of the matching section isn't critical. A good match can be achieved at many places on the loop. Changing the position mostly affects the loop's radiation null. I found by modeling with EZNEC that the best compromise is the bottom corner opposite the capacitor.

The matching section must be open at one end to permit connection to the feed coax. Use a CPVC plastic coupler as shown in Figure 8 for this. CPVC is not ordinary PVC. These special fittings are made of high strength, high temperature plastic to allow of the galvanized steel pipe nipples mounted on floor flanges on the RV roof.



near the ends of the CPVC coupling through the match-

ing section pipes for 6-32 stainless steel connection screws. Solder brass nuts inside the pipes. Use a stainless steel screw to hold the brass nut in place while soldering. Make the actual connection with a short coax pigtail fitted with ring terminals on one end and a PL-239 connector on the other. Weatherproof the pigtail.

You must also slip HF ferrite beads (roughly 50) over the feed coax near the loop to form a coaxial choke. Without the choke, currents on the outside of the coax make matching nearly impossible. Secure the beads with heat shrink tubing. I prefer a W2DU style ferrite choke balun for this. Several Internet vendors offer these.

Tuning the Loop

The best tool for tuning the loop is an MFJ-239 or similar SWR analyzer, but you can also tune it with an ordinary SWR bridge and your transceiver (at low power). Simply adjust the capacitor for the lowest SWR. The dimensions shown in Figure 5 for the matching section provide a good match over the entire 40 meter band. In a different location, such as an attic or a tree, you may need to lengthen the matching section. By experiment I have found that the closer the loop is to other objects the longer the matching section needs to be. The capacitance is changed by sliding the 11/4 inch tubing up and down.

Tuning While Operating

A big difference between a compact loop and a full-sized dipole is bandwidth. The loop is sharper. Most shortened antennas have inherently high Q. Therefore, some form of remote tuning while operating is desirable. My preference is an antenna tuner at the operating position, leaving the loop tuned to the center of the band. Some purists may object to this because the SWR on the feed line increases as one moves off center frequency. Actually, the loss is small. To be sure, I made signal strength tests to determine how much actual loss there is. With a tuner and 25 feet of RG-8X, I can not discern any appreciable difference in the transmit or receive signal strength over the entire 40 meter phone band. Subsequent on air experience has confirmed this.





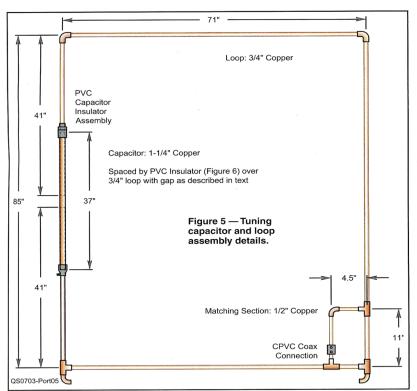
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Let's now take a closer look at ground plane or soil loss. First of all, a $\lambda/4$ antenna is not a complete antenna. A resonant antenna needs to be at least $\lambda/2$ long. A $\lambda/4$ whip is, therefore, only half an antenna.

So how then does a $\lambda/4$ whip work? Visualize, if you will, a $\lambda/4$ whip mounted vertically on a metal mirror. What would you see looking at its reflection in the mirror? An upside down whip, of course. Well, that reflection acts as the other half of the antenna. It literally makes the whip into a $\lambda/2$ antenna. Therefore, a ground plane is essential for a $\lambda/4$ whip. What's more, that ground plane needs to be highly conductive — metal in most cases.

Not only this, but the ground plane should extend at least $\lambda/4$ in all directions from the base of the whip. When, for example, you use a 19 inch $\lambda/4$ 2 meter whip on your car, the metal body is able to provide an adequate ground plane. It is large enough on 2 meters. On HF, however, it isn't. A vehicle's metal body on HF is usually too small to provide a complete ground plane. Instead the soil under the mobile rig carries significant current. The ground, and the resistance of any connections or wires in loading coils, adds significant resistance to the equivalent circuit. The result is that the resistive part of a typical HF vertical antenna is perhaps 35 Ω , in series with a

radiation resistance, the part of the equivalent circuit that results in radiation, of only a few ohms, depending on the band in use.

To illustrate why this is a big problem, consider a full length 32 foot $\lambda/4$ vertical antenna on 40 meters. Theory predicts a radiation resistance of roughly 36 Ω in series with any soil resistance. The soil resistance can easily equal the radiation resistance; if so, about half of the transmitter's power is heating the soil. This is why we often use radials on a vertical antenna. They reduce the ground resistance.

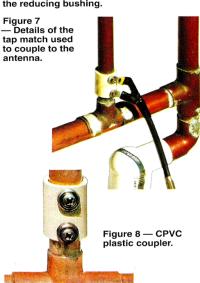
Let's now shorten the whip to 8 feet, the average length of a mobile HF antenna. Now the radiation resistance will be roughly 2 Ω . In series with 35 Ω of soil resistance a typical 8 foot long mobile whip on 40 meters has an efficiency of roughly 5%. Worms get 95% of your transmitter's power.

In contrast, a compact loop has high efficiency because the soil resistance is no longer in series with its radiation resistance. That's why this loop consistently outperforms my conventional 40 meter HF mobile whip by as much as 2 S-units.

Loops for Other Bands

You can build a compact loop for almost any HF or VHF band. To do so, download a copy of the handy *Excel* compact loop spread sheet from AA5TB's Web site: **webpages. charter.net/aa5tb/loop.html** (scroll down for

Figure 6 — Cover for open end of capacitor made by gluing together a 1½ inch coupling, a 1½ inch pipe cap and a 1 × ¾ inch reducing bushing. Before gluing, drill a ¼ inch hole through the top of the pipe cap and through the reducing bushing. A 1 inch coupling may be substituted for the reducing bushing.



loop cal.xls). It dynamically calculates all the needed parameters. Using it, I have successfully constructed compact loops on several HF and VHF bands. For the matching section, you can essentially just scale the dimensions shown here by frequency. Try one — you won't be disappointed.

Notes

"J. Portune, W6NBC, and F. Adams, WD6ACJ, "A Weather Vane Antenna for 2 Meters," QST, Aug 2005, pp 35-38. "Feedback, QST, Oct 2005, p 35.

John Portune, W6NBC, received a BSc in physics from Oregon State University 1960, his General Radiotelephone license in 1961 and his Advanced class amateur license in 1965. He spent five years in England as G5AJH and upgraded to Amateur Extra class in 1985 to become a volunteer examiner (VE). John retired as a broadcast television engineer and technical instructor at KNBC in Burbank and then from Sony Electronics in San Jose, California.

John is active on many bands and modes, predominantly from his HF RV mobile station. He has written various articles in ham radio and popular electronics magazines and remains active as a VE team leader, ham license teacher and Web site designer. You can reach John at 1095 W McCoy Ln #99, Santa Maria, CA 93455, or at jportune@aol.com. More information on loops can be found on his Web site at www.w6nbc.com.



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FCC LEGACY CORES SYSTEM HAS BEEN RETIRED

The Federal Communications Commission (FCC) retired the <u>Legacy version</u> of its **CO**mmission **RE**gistration **S**ystem (CORES) on July 15, 2022. CORES is the FCC's public-facing database that enables and tracks certain types of FCC and FCC applicant actions, including amateur radio applications and licenses. Its implementation has enabled routine amateur applications and licenses to be issued overnight instead of over weeks, as was the case with earlier methods. The <u>updated version of CORES</u> is now available.

In essence, CORES is designed to identify those who hold certain types of FCC licenses and FCC authorizations, including amateur licenses, and organize them in an easily accessible manner under a common FCC Registration Number (FRN) regardless of whether one holds a single such authority or thousands. The new CORES, in addition to assigning individual FRNs, allows holders of multiple FRNs to aggregate them under a single account where the licenses and authorizations, fees and payments, and related actions can be administered from within the same account.

In effect, new CORES can be conceptualized as an electronic interactive file folder. The <u>updated version of CORES</u> has been available since 2016, and its use is now mandatory for all amateur licensees when submitting amateur-related applications.

The Legacy CORES website now re-directs users to the <u>Commission's updated CORES</u> site. Although some functionalities in the old system will continue to work for a short time, the <u>FCC has urged all users</u> to transition to the updated CORES system to take advantage of its enhanced security and functionality.

Register with the FCC

Licensees that do not already have an FCC CORES Username Account must create one with a unique username (a valid email address) and password. After creating the account, when logged in, users should associate their existing FRN or FRNs with this account. Instructions for doing so are on the FCC Registration Help web page. One's FRN is printed on all current amateur applications and licenses, and will not change. FRNs can also be found by looking up one's call sign in the Commission's ULS (https://wireless2.fcc.gov/UlsApp/UlsSearch/searchLicense.jsp) or by using the FCC's Advanced Search web page.

The FCC has posted <u>tutorial videos</u> to assist with the transition. ARRL VEC Manager Maria Somma, AB1FM, recommends viewing "Getting Started With the New CORES," which explains how to register for a CORES Username Account, and "Associating an FRN to a Username," which instructs Legacy CORES users on how to link one or more existing FRNs to a username. <u>FCC CORES Registration Instructions</u> can also be found on the ARRL website.

Additional information is available on the <u>FCC</u> website or by calling the FCC Licensing Support Center at 877-480-3201, Option 4, and on the FCC's <u>e-support</u> web page.



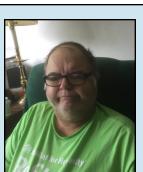
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Paul Bleuel 1957 –2022



Club member Paul E. Bleuel was born on October 2, 1957 in Beaver Dam, WI to the late Kenneth and Mary K "Kate" (Hickey) Bleuel. Paul is a alumnus of St. Mary Springs Class of 1975. He started his working career at the family business Dairy Queen on Fond du Lac Avenue. He had various jobs throughout the years, but loved his current job working every fall at the Little Farmer which he started in 2015.

Paul was a former drummer in the the Marquis Drum & Bugle Corps. Paul had many hobbies and interests and currently was involved in Fond du Lac Model Railroad Club, the Green Valley 4-H Club, the Lighthouse Anglers fishing club and his newest club, the Fond du Lac Amateur Radio Club. Paul loved music and he enjoyed traveling locally or in the region with his sons Joshua and Dustin and girlfriend Cathy to various bands he loved to hear. He had a life long interest in Genealogy, he spent many, many hours of research. Paul was also a avid reader.

Paul is survived by his sons Joshua and Dustin Bleuel of Fond du Lac, Significant other, Cathy Strohmeyer of Fond du Lac; three sisters, Susan (David) Penepent of Norwood, NY; Rita (Micheal) Oksa of Waupun and Jean (Patrick) O' Brien of Grafton; nieces, nephews, and other relatives and friends. He was preceded in death by his parents; one son James Bleuel and nephew Tyler Gallitz.

Paul passed away July 14, 2022 at St. Agnes Hospital. While in the hospital recovering, he was studying for his General exam. Paul also volunteered to place Ham Radio brochures in local schools and the YMCA. Rest in peace Paul.



2022 HAM EXAM DATES

The Fond du Lac Amateur Radio Club Volunteer Examiners have scheduled two more exam sessions for October 15, 2022 and December 10, 2022 in room O-122 at MPTC. Everyone taking amateur exams is required to get a FRN from the FCC website to put on their FCC application as well as provide a photo ID. I have a suggestion for people taking the Technician exam to also study for the General exam since if you pass the Tech. exam on the first try you can take the General exam for free. Cost of the exam is \$15. Preregistering is encouraged, but walk-ins are allowed at the exams. To pre-register for any of the exam sessions call Doug Schultz at 920-922-3088 or via email at: schultz74@charter.net. Face masks are no longer required at MPTC.



Month of July 2022

FOND DU LAC AMATEUR RADIO CLUB

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August 2022







Doug Schultz N9EZF

		Previous	Income &	Current		Savings	Checking		
		Month	Expenses	Total	Cash	Account	Account	CD	Other
FDL R	ADIO CLUB								
Truck	Fund	0.00	0.00	0.00			0.00		
Emerg	gency Svc Fund	2,097.84	0.23	2,098.07			1,632.52	465.55	
Gener	al Use Fund	5478.65*	-92.56	5,386.09			4,193.74	1,192.35	
Saving	s Account	25.00	0.00	25.00		25.00			
Petty	Cash Fund	19.12	0.00	19.12	19.12				
	TOTALS	7620.61*		7,528.28					
				,					
FDL R	EPEATER ASSN.			0.0000000000000000000000000000000000000					
Repea	ter Fund	153.75	0.08	153.83			0.00	153.83	
	TOTALS	153.75		153.83					
	* Adjusted to Check	book balance							
				TOTALS	19.12	25.00	5,826.26	1,811.73	
	Income								
	Dues								20.00
	IRS Refund								275.00
	CD Interest								0.90
								TOTAL	295.90
	Expenses								
	Dennis Paulin	Simon Flowers	Meat	Field Day					116.42
	Porta Potty Ren	PortaPotty Rent		Field Day					159.14
	Peter Fox	FD Fuel		Field Day					112.00
								TOTAL	387.56
	Bills Needing A								0.00



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CLUB MINUTES FOR JULY 2022

The meeting was called to order by Vice President Joe Scheibinger K9VY at 7:00 PM. Joe then thanked Dr. Jack Heil KG9IN for the successful Field Day and there was standing ovation for Jack Heil's 2022 Field Day leadership.

Joe then began the program on Ham Radio Deluxe via Skype with Dr. Mike Carper from Australia. Ham Radio Deluxe has 5 main features. 1. Rig Control, 2. Logbook, 3. DM780, 4. Rotor Control and 5. HRD Alert. He demonstrates the modes and then he starts WSJT-X for FT8 and demonstrates how the logging program in HRDC works with FT8. He was running a radio connection in the State of Maine using his WA9PIE call. He also demonstrated some of the new features of HRD. They will be adding a chat feature and HRD Alert will also be added. (FARC members can get a 30% discount by using FARC2022 on the company page)

VP Joe Scheibinger asked if everyone had seen last month's meeting minutes in the newsletter. Doug Schultz N9EZF made a motion to accept the minutes un the newsletter and Dick Finn KC9ZVW seconded the motion. The motion passed to approve the minutes. Doug Schultz N9EZF presented the Treasurer's report. Don Chapman KC9KZQ made a motion to approve the Treasurer's report and Tom Powell KC9VXR seconded the motion. The motion to approve the Treasurer's report passed.

Cully Kowal KSOD mentioned he couldn't find the latest Technical Manual from W5YI. Doug Schultz said that ARRL has the new Technician license study manuals available on their website. The new Tech. exam questions pool took effect on July 1, 2022.

Doug Schultz N9EZF said we had a new member application from Patrick Knowles K9ZPU. A motion was made by Cully Kowal KSOD to approve the membership application of Patrick Knowles K9ZPU and the motion was seconded by Phil Schmahl W9PHL. The motion was approved unaminously.

Cully Kowal KSOD was asked about the status of the club's 501C3 application. Our latest application was rejected and we received a refund check but we didn't receive a letter stating the reason for rejection. Cully's son Brad will call the IRS and find out the reason for the rejection. If that is unsuccessful it was suggested that maybe Congressman Grothman's staff maybe be able help our club with the application and approval.

VP Joe Scheibinger then asked Dr. Jack Heil KG9IN to report on Field Day. Jack said Field Day went smoothly with not many problems. We had plenty of food and the RV worked out very good. Lee Clausen KC9ZVZ than asked why we didn't set up in a city park? Jack mentioned the main reason is we would a need a permit and we couldn't operate overnight in the parks.

Doug Schultz N9EZF brought up that we need operators to man checkpoints in Fond du Lac County and needs volunteers. More details will follow. The group that run Race the Lake bike race donates about \$300 to our club for our help each year.

Justin Buell KB9YET showed a suggested layout for the shelves and desk in the trailer. Joe Scheibinger K9VY suggested we discuss the trailer layout at a board meeting.

Jack Heil KG9IN has sent Congressman Grothman a thank you letter for attending our Field Day event.



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"22 IN 22"

MEMBERSHIP DRIVE

WE STILL HAVE 13 NEW MEMBERS TO GO

WE HAVE ONE NEW MEMBER to report this month as of the writing of this newsletter. Patrick Knowles K9ZTU has joined the FARC. Everyone who brings in a new member, or an old member absent for a year or more that wants to re-join our club, will get one year's worth of dues paid! To make sure you get credit, look at the attached membership form and fill in your name. You will see a red box labeled "sponsor." Put your name and call sign in the box and when the new member joins, you get a free year of membership dues! (12 new members to go!)

Let's make 2022 the best year for our club. For the July meeting, call up a buddy and invite them along!



Gab<mark>riel</mark> Baio Dawn Krause Gab<mark>riel</mark> Stark

Randy Nelson Gabriel Bajo Paul Bleuel







FOND DU LAC ARES NEEDS OUR HELP

WITH RACE THE LAKE BIKE RACE

Fond du Lac County ARES needs Technician or higher licensed amateurs to assist with race communications throughout Race the Lake Bike Race course in Fond du Lac County on Sunday, August 21, 2022. Since we will be using the Appleton 146.76 repeater as the primary frequency you should be able to use an HT for this race with a gain antenna depending on actual location to get into Net Control at Lakeside Park. If you have a mobile VHF rig in your vehicle you should have no problems getting into Net Control. This is part of the Public Service aspect of Amateur Radio licenses. If you can help at Race the Lake Bike Race contact Doug Schultz at email: schultz74@charter.net or by phone at: 920-922-3088.

Doug Schultz

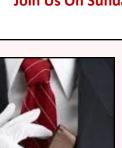


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The FCC has announced that effective on April 19, 2022 they will begin assessing the \$35 application fee on new, renewals and vanity callsign applications. Upgrades to amateur licenses will be exempt from the \$35 application fee according to the ARRL-VEC. Administrative updates, such as name changes, mailing or email address changes will be exempt from the fee. VE's and VE teams will not have to collect the \$35 application fees at exam sessions. They will charge the normal \$15 ARRL-VEC exam fee to applicants. The successful applicants will be required to pay the \$35 application fee directly to the FCC by using the CORES FRN registration system.

When the FCC receives the examination from the ARRL-VEC, it will email a link with payment instructions to each successful candidate who will have 10 calendar days from the date of the email to pay the application fee. After the fee is paid the examinees will receive a second email from the FCC with a link to their official license. The link will good for 30 days. Additionally, the FCC stated that applications processed and dismissed will not be entitled to a refund. This includes vanity requests where the applicant does not receive the requested callsign.

THANK YOU FOR BEING A MEMBER!

Club membership dues are \$15 for individuals, \$7.50 for students and family memberships are \$20. You can pay Doug Schultz at any meeting. Sign up a new or expired member that has been away for more than a year and you will get your dues FREE of charge with the new "22 in 22" incentive program. Send your dues or application (attached in newsletter) to:

> **Doug Schultz N9EZF** Fond du Lac Amateur Radio Club, P.O. Box 53, Fond du Lac, WI 54936

Check out the new poster on the right! This poster is also attached to the email that is bringing your newsletter. Please attach the picture to your Facebook page! Announce to your friends that we will be meeting Monday night and tell them how much fun you can have being a Ham Radio Operator. There are applications for membership inside this newsletter. Print them off and for every member you bring to the club, you





Don't Miss an Episode!

All Podcasts can be downloaded!

To Hear the Podcasts CLICK HERE





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August 2022

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

Tone 97.4 Hz





It's fun to go back in history and look at the achievements we have made as Amateur Radio operators. So throughout the year we will investigate old and fun news stories about local radio and local Hams from our area. So let's go back to the earliest printed articles in the FDL Reporter once called the Commonwealth, back almost 60 years ago when car tires sold for \$18 each!

Oct 31 1966

Treats

There was little Halloween trick or treating here Sunday afternoon despite an appeal by Council President Raymond Puddy issued last week.

However, costumed youngsters are expected to be out "in full force" after school today on their trick or treat rounds. It has been suggested by authorities that children be outside only during daylight hours.

Police expect little vandalism tonight but have taken their normal precautions. Assisting police tonight will be members of the Fond du Lac Amateur Radio Club and the Citizen's Band Radio Club. They will provide communications facilities at the Safety Building.

Nov 9 1966

Amateur Radio Club - Members of the Fond du Lac Amateur Radio Club will have their 10th annual banquet Saturday at Bernward Hall. Reservations may be made with Earl Jenkins, club secretary, Morris St.

March 2, 1970

City Police Investigating Several Weekend Thefts

A thief or thieves burglarized 12:30 a.m. Sunday and took an the amateur radio shack at undisclosed amount of liquor. Park over the weekend, taking more than \$500 wearing ski jackets, were in radio equipment and four observed leaving the dining folding chairs.

p.m. Saturday and 5:30 p.m. their investigation of the Sunday by forcing open the incident. front door of the shack. In addition to the chairs a rotor Ave., had \$860.25 in checks (\$129.95), transmitter (\$175) and taken by somebody from the receiver (\$250) were taken.

Ave., reported to police that Saturday. Postal authorities he set his tape recorder down have been notified of the theft. in the A & P Super Market, Inez Busse, an employe at 33 E. First St., while shopping the H. C. Prange Co., 755 W. and returned to find it missing Johnson St., notified police that The theft of the tape recorder somebody rifled her purse, and tapes occurred at 11:45 while it was placed on a a.m. Saturday.

juvenile boys who entered p.m. Sunday and a wallet, with the dining room at Petrie's a small amount of money, Resturant, 84 N. Main St., about missing.

The trio, described by a waitress as being young and room by a back door with the Entry was gained between 5 liquor. Police are continuing

Alice O'Brien, 444 E. Merrill mail box at her residence Rodney Nielsen, 461 Wettstein between 9 a.m. and 12:40 p.m.

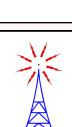
balcony desk in the store. She Police are looking for three found her purse opened at 2:30



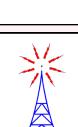
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August 2022

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







FARC MEETING! August 8th Moraine Par



08/13/2022 - W9UDU Free Fest 2022

Location: Racine, WI **Type: ARRL Hamfest Sponsor: W9UDU**

Website: http://www.w9udu.org

08/27/2022 - Circus City Swapfest

Location: Baraboo, WI **Type: ARRL Hamfest**

Sponsor: Yellow Thunder Amateur Radio Club

Website: http://yellowthunder.org

09/10/2022 - Ozaukee Radio Club Fall Swapfest

Location: Cedarburg, WI **Type: ARRL Hamfest**

Sponsor: Ozaukee Radio Club (ORC)

09/23/2022 - 09/24/2022

HRO Superfest, ARRL Central Division Convention

Location: Milwaukee, WI **Type: ARRL Convention Sponsor: Ham Radio Outlet** Website: http://wi-aresraces.org/

10/08/2022 - Black River Amateur Radio Assoc. -17th Annual Central WI SwapFest

Location: Colby, WI Type: ARRL Hamfest

Sponsor: Black River Amateur Radio Association

10/15/2022 - Wisconsin ARES/RACES Conference 2022, ARRL Wisconsin State Convention

Location: Wisconsin Rapids, WI Type: ARRL Convention **Sponsor: WeComm Ltd**



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FARC RECORDED



Videotaped by Lloyd Vandervort N9PRU

CLICK HERE FARC - Bob Heil Ham Radio Presentation

CLICK HERE FARC - WWV Presentation

CLICK HERE FARC - Pacific Antenna Talks Kit Building

CLICK HERE FARC - Scanner Master Presentation

CLICK HERE FARC - WBAY Field Trip TV (11/17/15)

CLICK HERE FARC - WBAY transmitter tour

CLICK HERE FARC - NooElec

CLICK HERE FARC - Elecraft Radio

CLICK HERE FARC - Ed Tobias & Morse Code

CLICK HERE FARC - Salvation Army Emergency Communications

CLICK HERE FARC - KFIZ, Morning Show with Bob Hoffmaster

CLICK HERE FARC - HAARP interview from Alaska

CLICK HERE FARC - The "DZ Kit" Ham Radio Kits (02/12/2018)

CLICK HERE FARC - Christmas Island DXpedition with Bill Kendall (04/09/18)

CLICK HERE FARC - Restoring Old Antique and Classic Radios (5/17/2019)

CLICK HERE FARC - SDR Radio with Steve Brightman (01/10/2022)

CLICK HERE FARC - Paul Ewing and his Incredible DXpeditions Around the World

CLICK HERE FARC - Fond du lac Amateur Radio Club presents Dave Sumner IRAU

FARC - Solar Cycles with Carl Luetzelschwab K9LA (03/14/22)

CLICK HERE FARC - The Collection & Legend of George E. Ulm W9EVT (04/11/22)

CLICK HERE C - Field Day 2022 radio interview on KFIZ (6/20/22)

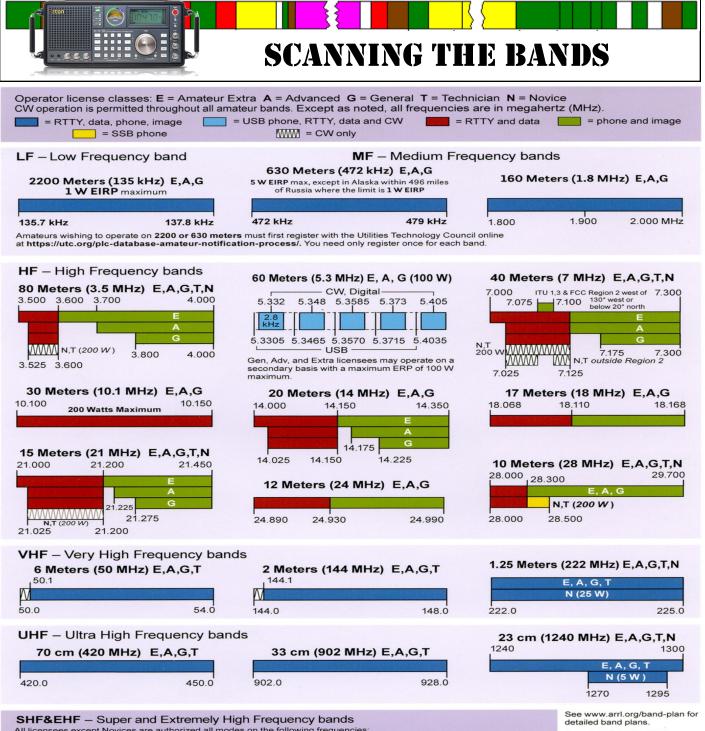
CLICK HERE Radio Deluxe Software with Dr. Carper (7/11/22)





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2390-2450 MHz

5650-5925 MHz

24.0-24.25 GHz

76.0-81.0 GHz

122.25-123.0 GHz 134-141 GHz

241-250 GHz All above 275 GHz Copyright © ARRL 2020 OTAbands rev. 1-22-20



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FARC Membership Roster



4	А	В	С
1	Call Sign	First	Last
2	AA7BQ	Fred	Lloyd
3	AA9UU	Pete	Leonard
4	AC9EX	Todd	Beay
5	AC9XW	Doug	lverson
6	K9AIX	Jim	Balthazor
7	K9DUI	David	Zittlow
8	K9FDL	Dot	Olig
9	K9HXI	Chuck	Mahnke
10	K9KHW	Ray	Grenier
11	K9LA	Carl	Luetzelschwab
12	K9VY	Joe	Scheibinger
13	K9WKM	Walter	Meyer
14	K9ZW	Steve	Weinert
15	KA9JDE	Brad	Gehrt
16	KB1ZJK	Ed	Steinfield
17	KB9OFM	Dennis	Paulin
18	KB9POP	Larry	Lamont
19	KB9WZD	Peter	Fox
	KB9YET	Justin	Buell
20	KC9FZE	Kirk	
21			Everson
22	KC9IGD	Danny	Vandekolk
23	KC9KZQ	Don	Chapman
24	KC9LFI	Marjean	Buck
25	KC9LFN	Neal	Buck
26	KC9LFR	Brian	Turkiewicz
27	KC9MDY	Joe	Lauber
28	KC9MYG	Randy	Nelson
29	KC9NAA	Paul	Bleuel
30	KC9ONY	Tom	Trethewey
31	KC9QYP	Brad	Freund
32	KC9QYR	Tony	Pass
33	KC9RUE	Larry	Mielke
34	KC9SGL	Jeremiah	Alderden
35	KC9TFN	Donna	Blend
36	KC9UVJ	Buddy	Larson
37	KC9VXR	Tom	Powell
38	KC9VXV	Blend	Bowen
39	KC9VZY	Tom	Karrmann
41	KC9YVL	Ron	Keller
42	KC9ZVT	Doug	Murray
43	KC9ZVW	Dick	Finn
44	KC9ZVX	Fernando	Salazar
45	KC9ZVZ	Lee	Clausen
46	KD0HCW	Donald	Bakke
47	KD9CAW	Dawn	Krause
48	KD9CSD	Mathew	Yates
49	KD9EHB	Gregory	Schmude
50	KD9EMX	Richard	Jarzynka



These are the devoted members of one of the best Amateur Radio Clubs in the Midwest, dedicated to community service, and dedicated to preserve and protect one of the greatest hobbies in the world.

Amateur Radio operators come from all walks of life -- doctors, students, kids, politicians, truck drivers, movie stars, missionaries and even your average neighbor next door. They are of all ages, sexes, income levels and nationalities. Whether through Morse Code on an old brass telegraph key, voice communication on a hand-held radio or computerized messages transmitted via satellite, all hams use radio to reach out to the world.



51 KD9FPG Isaac Lundberg 52 KD9IAG Gene Peterson 53 KD9IAH Ted Gustavus 54 KD9IAN Derek Giese KD9JAD Walter Drees 56 KD9KTY Matthew Zimmerman 57 KD9LVQ Ben Haack 58 KD9OXO Frank D'Imperio 59 KD9QLE Raymond Teschke 60 KD9TQA Bill Hutchinson 61 KD9UWC Gabriel Meyer 62 KD9UWD Mike Kraus 63 KD9UWE Paul E. Bleuel 64 KD9ZP Gene Olig KG9IN Jack Heil KG9IO Bill Kieckbush 67 KS0D Cully Kowal 68 NOHOR Tom Murray Robert 69 N2TSQ Burrier Reinholt Aschmotat 70 N8VDH 71 N9EZF Doug Schultz Paul Tvrdy 72 N9KLK 73 N9NEZ Gabriel Stark 74 N9PJQ Ed Beltz 75 N9RPU Vandervort Lloyd 76 N9RQL Michelle Lawrence 77 N9UA Mike Lawrence **78 N9WAM** James Scovronski **79 N9WAP** Jim Cole N9WQ David McCumber 80 W9AAV Timothy Braun 82 W9EVT George Ulm 83 W9GPI Steve Smith W9LUQ Neuburg Ted W9NHE Willett 85 Ted W9PHL Phil Schmahl 87 W9TJP Tom Pachner W9VYO Ed Sipple WB9OJD Erling Gruel 90 WD9CYM Mark Forss 91 WD9W Dave Witt Yates 92 Laura 93 Scott Kreis 94 Debra Drees 95 Brad Hansen 96 Richard Regent 97 Tom Sturtevant 98 Gabriel Baio 99 Dave Harms

Fond du Lac Amateur Radio Club Newsletter

August 2022



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MEMBERSHIP INFO & APPLICATION



Please Print All Information Complete both sides of this Application

Call	License Class ——		Date	
Name				
Address				
City			_ State	_ Zip
Phone		Cell Pho	ne	
E-mail Address			Sponsor Name	
Do you have a web site?	f so, list here			
Membership Dues Individual Dues are \$15 per \$15 per year plus \$5 for each him/her complete a sepa Membership Application by of each year thereafter.	additional family mem rate Membership App	berif your s lication. Du	spouse/son/daught les are payable u	ter is licensed, please have pon acceptance of your
NOTE:	Dues for NEW members	are pro-rate	d if joining after Jul	y 1st:
☐ Individual \$7.50	☐ Student\$3.75 ☐ Far	nily \$10 + \$2	2.50 for each addition	onal family member
Membership Applica	tion			
I hereby apply for member Constitution and By-laws of on any committee or in any ability. I understand that, as are sponsored by the Club. I good example for other han	the Club. And, recognizing elected office to which is a member, I am expect will conduct myself ap	ing that an or I can give the ed to help at propriately l	rganization does no e proper time and a : all events, includir	et run itself, I agree to serve attention, to the best of my ng fund raising events that
Signed			Date	

Background and Interests

Please tell us a little about your "ham shack" and your interests in the Amateur Radio hobby. (Radio equipment, antennas, DX, contesting, rag chewing, HF, VHF, UHF, Packet, RTTY, Microwave, EME, satellite, emergency preparedness, etc) If not yet licensed, are you into shortwave listening? How did you hear about the Club?
equipment, antennas, DX, contesting, rag chewing, HF, VHF, UHF, Packet, RTTY, Microwave, EME, satellite, emergency preparedness, etc) If not yet licensed, are you into shortwave listening?
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How did you hear about the Club?
How did you hear about the Club?
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Security Preferences
Do you want your phone number listed in the on-line Club Directory? ☐ Yes ☐ No
Do you want your cell phone number listed in the on-line Club Directory?
Do you want your E-mail address listed in the on-line Club Directory? ☐ Yes ☐ No
Interests
Are you a member of the ARRL (American Radio Relay League)?
Are you interested in Emergency Services (ARES/RACES)?
Are you interested in weather spotting (SKYWARN)? ☐ Yes ☐ No
The Club maintains several standing committees. Please indicate any that you would be interested in serving on (you may check more than one): Testing Contesting Communications Van
 □ Public Service □ Fund Raising □ Repeater □ Field Day □ Program □ TVI □ Education/Scholarship □ Contesting □ Web Site □ Publicity/Newsletter □ On-Air Nets