



# FOND DU LAC AMATEUR RADIO CLUB

## — FDL 73 —



VOLUME 19 ISSUE 9

www.fdlhams.com September, 2018

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

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Truck Brad Freund KC9QYP  
TVI Lloyd Vandervort N9RPU  
Web Site: Jim Balthazor K9AIX

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

### Mailing Address

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Fond du Lac, WI 54936-0053  
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**Newsletter  
Submissions:**  
Please email to  
rfinn5@hotmail.com

### Hello from the shack of N9WQ.

Last month's venue was pretty interesting in that it made me look at the setup on my truck. I am going to install another HF/VHF/UHF radio in a different vehicle for winter so it was a good opportunity to rethink some of the ways you can install and make a bigger impact on your signal. Co-ax choice seems to be one issue and it appears for general use 8X seems to work best. In some cases where there will be exposure to the elements like rain ice salt extreme temperatures both hot and cold, movement like under the vehicle you may require something with better skin such as direct burial cable because. Various power requirements all will also require something a little different for each application.

Another thing to think about is amplifiers. There are a lot of choices from introducing home-brew, solid state, export and other types of units converted from one band to another. In some instances there may be restrictions on which bands you can use them on because of modifications. Some mobile amps are designed to work on all bands and some only a few or just one. Just remember more power means more antenna.

I want to Thank Kevin N9NAQ for coming up and sharing his ideas and experience to our club Members!!



### Next Meeting

**When:** September 10, 2018 at 7:00 pm

**Where:** Moraine Park Technical College, Room A-112

**Program:** Patriot North Exercises at Volk Field



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### Brat Fry Doug Schultz N9EZF

The Brat Fry on August 24th and 25th wasn't as successful as our record Brat Fry in June due to rain during the lunch hour on Friday. Our net profit was \$724.50 which was a little below our average for August Brat Fries.



I would like to thank Lloyd Vandervort N9RPU, Deb Florian, Wally Drees KD9JAD, Dick Finn KC9ZVW, Joe Scheibinger K9VY, Tom Powell KC9VXR, Joe Lauber KC9MDY, Peter Fox KB9WZD, Paul Bleuel KC9NAA, Tom Karmann KC9VZY, Dennis Paulin KB9OFM, Gene Peterson KD9IAG, Doug Murray KC9ZVT and daughter for helping at the Brat Fry. Without these volunteers we wouldn't be able to hold these fund raisers.

We will be evaluating our menu prices and we will probably be raising menu prices next year due to cost increases on meat.

Picking up the trailer at Hoff's in Brownsville was a little more challenging than normal as they were still under construction. They thought they would be long completed but now they are hoping to have part of the building ready for Labor Day. The back part, where the meat is prepared, is still original and they had our brats and burgers ready to go. Unfortunately, they had not received their order of buns so we were only able to get twelve dozen brat buns. All the buns were frozen so we had to start a quick effort to get them warmed up. We were able to stay ahead of the bun shortage thanks to local stores.

The start up went a little slower as we only had three people until 10:00. Still, we got things moving and had plenty of brats, burgers and warmed buns ready for the first customers.



*Lloyd Vandervort N9RPU takes the first order on Friday morning.*



*The morning crew dishes up the first brats to customers who must like brats for breakfast.*

*Doug Schultz N9EZF takes a break after the first round of brats and burgers are grilled.*



*Even Joe Scheibinger's K9VY dog Coco K9ARF volunteered on Friday.*







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### Brat Fry Doug Schultz N9EZF



*Joe Lauber KC9MDY waits for the next order to come in..*



*Paul Bleuel KC9NAA relaxes for a few minutes on Saturday..*



*Dennis Paulin KB9OFM and Peter Fox KB9WZD catch their breath between dishing up the sandwich's.*



*Tom Karmann KC9VZY takes a break as the Brat Fry wrapped up on Saturday.*



*Doug Schultz N9EZF and Gene Peterson KD9IAG pose for a picture just before we left to return the trailer to Hoff's.*



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### Scott Ruesch W9JU To Speak at the September Meeting Patriot North Exercises at Volk Field

On Monday night, September 10, Wisconsin Upper Michigan Division SATERN Coordinator Scott Ruesch W9JU will be speaking about the Patriot North Exercises at Volk Field representing the Saturn Amateur Radio emergency team



In July of 2017 a number of SATERN Communicators from the Midwest had the opportunity to participate in the Patriot North 2017 Exercise in Southwestern Wisconsin at Volk Field and Fort McCoy. The Patriot North is a Domestic Operation (DOMOPS) training exercise sponsored by the National Guard Bureau (NGB) and accredited as a Joint Training Program by the Joint National Training Capability (JNTC) Program. It provides a forum for coordination with Local, State, Federal government and civilian organizations to increase the understanding of coordination, policies and procedures required for joint inter-agency response per Defense Support to Civilian Authorities (DSCA) governance. This year the exercise was held July 17-20, 2017 for the portion the Salvation Army participated in.

Volk Field Air National Guard Base is a military airport located near Camp Douglas, WI. It is also known as the Volk Field Combat Readiness Training Center (CRTC). The base also houses Camp Williams, which is supported by the Wisconsin Army National Guard. The Wisconsin National Guard Museum is located at Volk Field. It contains aircraft, helicopters, artillery, and armored vehicles used by the Wisconsin National Guard over its existence.

Fort McCoy is a United States Army installation. It is located on 60,000 acres between Sparta and Tomah, WI. Since its creation in 1909, the post has been used primarily as a military training center. Fort McCoy is about 25 miles west of Volk Field.

The Patriot North training endeavors to exercise military, local authority and civilian response to disaster situations.



**(Editor's note)** Back before 911 Volk Field was accessible to local Wisconsin pilots for one day every 2 years. A welcome tour was given to each pilot that wanted to see the operations room and land on that incredible 9000 Ft. runway. That's not a misprint! The runway is a mile and  $\frac{3}{4}$ 's long! It was once considered to be an emergency runway for the Space Shuttle.

Not much of the field can be seen from the roads so Wisconsinites really don't know the size of this place. I called them at this writing and they no longer do public tours and the local pilot fly-in is no longer scheduled. They do have an excellent museum there for the public. If they ever re-open for tours it would be a great bus tour for us to see the operations and communications. (I sent a formal request today to Volk Field for a private tour for us. Don't hold your breath but you never know unless you ask!)

Many years ago I was fortunate to fly there and take the public tour, and it's a memory I will never forget. I had a 1946 Ercoupe and I remember seeing that incredible runway from 15 miles out. After the tour, I was one of the last to leave so I asked the tower if I could see how many takeoffs and landings I could do in a straight line on that very long runway. The controller chuckled and said go for it. So I made 10 consecutive takeoffs and landings to 50 ft on the 9000 ft runway, then departed for home. I'm sure the guys in the tower enjoyed it as much as I did. I departed for home with lots of great memories.





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### Vintage Amateur Radio de Bill Shadid, W9MXQ



This article shows the second product line by The Hallicrafters Company to move into the market created by Collins Radio Company and their S-Line Receiver, Transmitter, and Transceiver. Hallicrafters reinvented themselves in the release of their first installment, the SR-150 Transceiver that we detailed last month. Next, they released their SX-117 Receiver and HT-44 Transmitter. Like Collins, Hallicrafters focused on styling, ergonomics, and competitive performance in the new product entry. They kept the band coverage shown in the Collins 75S-1 while expanding the SX-117 a step beyond the Collins to cover the Broadcast Band and 160 meters – when properly optioned. Below you can see the Hallicrafters SX-117 and HT-44 station – with most of the related accessories – in operation at W9MXQ . . .



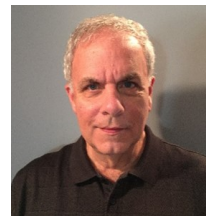
**HT-44 Transmitter with the HA-8 Splatter Guard on top, PS-150-120 Speaker/Power Supply with the HA-1 'TO Keyer on top, SX-117 Receiver with the HA-10 LF/MF Tuner on top.**

**Also, see the Astatic D-104 Microphone and Vibroplex VibroKeyer  
(Picture mimics my first sight of this station – for the record, I never stack radios!!)  
(This is a W9MXQ Shack Photo)**

Hallicrafters was, in the late 1950's and into the 1960's, one of the largest producers of ham radio equipment and accessories in the world. In 1965, advertisements in QST and CQ Magazine showed the same station as above. That same advertising made the point that 1965 was Hallicrafters' 31<sup>st</sup> year in business. They told us that they had "19 products to answer any amateur requirement." They said their closest competition had "less than half that number." Much of their business was concentrated in the United States, but the company had a global reach with customers all over the "free world." Hallicrafters was widely known for publicity generating events – including sponsorship of DX-Peditions and many events collaborating with the United States Air Force and other government agencies.



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In parallel to this new line, Hallicrafters also continued to produce “big iron” for the ham radio market due to their popularity. The famous Collins 75A-4 Receiver and KWS-1 Transmitter (reference an earlier installment in this series) were gone from the market by then. Hallicrafters made two such “big iron” stations. The highest cost and most spectacular setup was the SX-115 Receiver, HT-32B Transmitter, and HT-33B Linear Amplifier. Also, a lower cost version of that setup was the SX-111 Receiver, HT-37 Transmitter, and HT-41 Linear Amplifier. The SX-117/HT-32B/HT-33B lasted into 1964 but by then the lower cost SX-111/HT-37 station was gone. (The HT-41 Linear Amplifier went on a bit longer.) Hallicrafters based the SX-117 on the technically advanced SX-115 Receiver while the HT-44 was based, in some ways, on the HT-37 Transmitter. So, the family heritage moved forward. To those of you interested in this line, the SX-117 was a technically advanced version of the SX-115 receiver while the SX-111 was basically a low cost SX-101. This “big iron” will be back for your review in a later installment.

Like the SX-115, the SX-117 Receiver used a triple conversion scheme with a low noise 50.75 kHz third conversion – well known at the time in Hallicrafters radios for characteristically quiet receiver operation. Unlike some early SSB Receivers – but like the late versions of the SX-101 and SX-115 Receivers – the SX-117 used a Product Detector for demodulating SSB and CW signals. This change in receiver design in this period added to much improved AGC action. Before this, the practice of riding the RF Gain while keeping the AF Gain high began to fade. Today, this practice is virtually unknown to new operators. (But, it is very necessary to those of us using vintage gear even somewhat into the vintage of the SX-115 and SX-117!) I suggest that if you are interested in the design philosophy of the SX-117, check its ARRL Review in the May 1963 issue of *QST Magazine*. Personal experience says that the SX-115, while superior in several ways, could have benefitted by some features of the SX-117 – so all things considered, the SX-115 seems to be more superior from a reputation standpoint than from an operational one. Make no mistake, however, they are both fine radios.

The one shortcoming in Hallicrafters receivers of the time, including the much beloved SX-115, was that they stayed with what I refer to as tuned circuit i-f filters – avoiding costly mechanical or crystal bandpass filters. Collins receivers, starting with the 75A-4 Receiver, remain competitive to this day due to the design that included Collins mechanical filters. You will see in future installments that Heathkit, Drake, National, and others beat Hallicrafters at their own game by including crystal filters in their competitive designs. Indeed, Hallicrafters did the same thing in their SR-150 Transceiver – and came back to that design in their later products. These too will be seen in future installments.

The HT-44 Transmitter is a clever adaptation of an unexpected technology, from my point of view. In keeping with the thinking at Hallicrafters to avoid expensive crystal filters, they left behind the Crystal Filter SSB Generation successfully used in the early 1950's HT-30 Transmitter, the later HT-32 Series Transmitter, and the SR-150 Transceiver. Instead, they borrowed from the technology used in their very popular, lower cost, “big iron” transmitter – the HT-37 – and used Phasing SSB Generation. I will leave the description of the different methods of SSB Generation to your study of the *The Radio Amateur's Handbook* from the American Radio Relay League. My favorite treatment of that subject appears in the 1963 and 1964 editions of that Handbook, beginning on page 305 (in both editions). But, it can be found well before that and right up to my 2018 edition. Why do I prefer the 1963 edition? It is described with vacuum tubes!

For the record, the Hallicrafters HT-44 had a rated input power of 200 watts on 80-10 meters for SSB and CW. Output power was 100 watts with a bit less on 10 meters. The HT-44 here at W9MXQ meets that specification and more (but is held to no more than 100 watts output). The final amplifier uses a pair of 6DQ5B Tetrodes. The 6DQ5B's in the HT-44 here are date coded 1964 and are branded “Hallicrafters.” That means they were the original final tubes with the transmitter when it was delivered from the factory.



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Hallicrafters' path to this transmitter design must have been a real study in their engineering department. Transmitter development for generating a Single Sideband (SSB) signal had been split in the industry with signal generation using the Filter Method and the Phasing Method. The differences in these designs are the subject for another article but suffice it to say that by the early 1960's most of the industry had moved to the Filter Method. (Collins' use of Mechanical Filters put them in the "Filter" camp – application of crystal or mechanical filters is the same as far as circuit results are concerned.) Hallicrafters by that time had significant experience in both methods with good experience in the Filter Method with the HT-30, HT-32 series, and the SR-150. However, the Phasing Method was successfully used with the popularly priced HT-37 Transmitter. In what I consider a surprise after the recent release of the SR-150, Hallicrafters installed a phasing SSB generator in the new HT-44 Transmitter. Any concerns about sideband suppression stability – somewhat of a problem in the HT-37 Transmitter – were solved in the successful and stable HT-44. At least in the time of the HT-44, the Phasing Method produced a more robust audio sound at the receiving end of the communication circuit. (This is a subjective comment based on personal experience – not a scientific analysis! This almost certainly is a product of a wider signal bandwidth in the HT-44.)

My experience is that using a HT-44 Transmitter in a ham station generates a significant number of audio complements. And, as if to tell the world that Hallicrafters had solved stability issues with Phasing SSB Generation, they moved the carrier balance control off the front panel (as on the HT-37) and placed it inside the cabinet under the top cover. Their confidence was well founded. My use of the HT-44 Transmitter rarely, if ever, needs that control to be adjusted once set. Even many crystal filter transmitters were not that stable – and some of them, such as Swan, had balance controls on the front panel.

I must add that using the HT-44 Transmitter (as with the transmitter section of the SR-150 Transceiver) is ultra-simple. The radio is fix tuned for a 50-75-ohm feedline and, as such, has no Load Control. Tuning the transmitter merely involved peaking the frequency calibrated Driver and Plate controls for maximum output on the front panel RF output meter.

Accessories used with the SX-117 and HT-44 Station included some interesting items. They are included in this article – starting just below.

I reference above that the SX-117 Receiver took a step beyond its Collins competition (the 75S-1 Receiver) by providing for more frequency coverage. Like the Collins radio, the SX-117 alone allowed for additional coverage – between 3.5 to 30 MHz in the standard equipment receiver. With the addition of the HA-10 LF/MF Tuner, however, the SX-117 could cover from what we now refer to as VLF to past 160 meters and up to just below 80 meters.



The HA-10 LF/MF Tuner allows the SX-117 to tune from 85 kHz to 3 MHz using properly assigned Range Crystals in the receiver. The general coverage operation (coverage outside 80-10 meters) required the addition of an optional auxiliary crystal oscillator which was nothing more involved than plugging a 6EA8 tube into the oscillator tube socket. The circuit was included with the receiver. Only the tube was missing. In one of those radio collector mysteries, Hallicrafters did not always include the "h" red ball logo on this tuner (above the lettering, "HA-10.") See it in the at the right side of the HA-8 Splatter Guard front panel, below. Some advertising had the logo, and some did not. My HA-10 does not have it. **The HA-10 is a W9MXQ Shack Photo**





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### Vintage Amateur Radio de Bill Shadid, W9MXQ

I think the most unique accessory for the HT-44 Transmitter is the HA-8 Splatter Guard. If anything, the HA-8 is best described as a poor man's monitor scope.



The HA-8 Splatter Guard with its small feed-line coaxial sensor monitors the modulation level of signals – especially SSB signals. It used an EM-84/6FG6 “Magic Eye” tube. Used properly it senses power from 40 to 1,000 watts with insignificant insertion loss between 3.5 and 30 MHz. Higher frequencies up to past two meters are possible with a bit of a penalty of mismatch. However, the unit was designed as an HT-44 accessory. Setup involves adjusting the Sensitivity control at full carrier power so that the beams on the “Magic Eye” just close – “beams” from the left and right move toward the center from each side. During SSB Modulation one watches for the beams to stay at, or below, the center. A bright vertical line forms at the center if one over modulates.  
**The HA-8 is a W9MXQ Shack Photo**

In my SX-117 and HT-44 Station I use the Hallicrafters PS-150-120 Power Supply and Speaker Console. You saw a picture of this Power Supply in the installment of for the SR-150 Transceiver. The model number of this unit takes its “150” from that transceiver. The “120” designates the AC power supply line voltage.



The PS-150-120 supplied necessary voltages to operate the HT-44 Transmitter or the SR-150 Transceiver. The Power Supply included a speaker for use with the SX-117 Receiver (or the SR-150 Transceiver). Connections for the speaker in an SX-117/HT-44 installation were routed through the transmitter via receiver/transmitter interconnections. Hallicrafters used only solid-state devices (silicon diodes) in the power supply and avoided the vacuum tube circuitry used in the Collins 516F-2 Power Supply (which, by the way, did not include a speaker). Also, Hallicrafters included pin connector sockets on the chassis to allow reading of plate current and voltage with a simply Volt-Ohm-Meter. Hallicrafters sold this unit internationally but I have not seen any evidence of there being a “PS-150-220” variant for use with 220-volt circuits. Nor have I seen a 220-volt version of the SX-117. I believe at the time it was more common to use a 220 to 110 VAC step-down transformer.

**The PS-150-120 is a W9MXQ Shack Photo**





### Vintage Amateur Radio de Bill Shadid, W9MXQ



**Hallicrafters HA-1 'TO Keyer**  
(The HA-1 is a W9MXQ Shack Photo)



**Hallicrafters HA-1A 'TO Keyer**  
(The HA-1A is a W9DYQ Shack Photo)

The HA-1 'TO Keyer' was a non-lambic Electronic Keyer using six vacuum tubes, two of which are regulators. The Keyer has a sidetone generator (not a transmitter feature in those days) and a mercury-wetted relay for keying. Keying contacts were designed to take up to 500 volts at up to 250 VA. Imagine that in today's Keyers! There was a later version of this Keyer, called the HA-1A that pretty much used the same design with knobs and front panel lettering to compliment the latest Hallicrafters products. Note differences in pictures, above. Incidentally, the Keyer was named by Hallicrafters after W9TO, designer of the circuit.

**The HA-1 is a W9MXQ Shack Photo**

A major accessory for the SX-117 and HT-44 was the HT-45 "Loudenboomer" Linear Amplifier – this is not the first in Hallicrafters policy of naming radios in addition to model numbers. Recall other names such as "Sky Buddy," "Ultra Sky rider," "Sky Challenger," and the later "Tornado," "Cyclone," "Hurricane," and "Safari" radios we have yet to cover in this series. The Loudenboomer will be covered in a future installment detailing its design use with the SX-117/HT-44 and with the SR-150 Transceiver.



The matching Hallicrafters HT-45 Loudenboomer Mark IIA Linear Amplifier. A Story for a future installment. Not shown is Model P-45, 3,000 (VDC) Power Supply.

**The HT-45 is a W9MXQ Shack Photo**



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### Vintage Amateur Radio de Bill Shadid, W9MXQ



This equipment has been with me for over 30 years. I came via a chance meeting with a fellow during the time when my QTH was in Columbus, Ohio. Back at that time, vintage gear did not carry near the value it does today – treated then more like useless “stuff.” The owner was a friend of a local ham radio store manager and he was looking to find a good home for his SX-117, HT-44, PS-150-120, and the HA-8 Splatter Guard. Also, part of the package was the HT-45 Linear Amplifier and its matching P-45 High Voltage Power Supply. He asked simply that I promise to keep it and to take care of it – and pay him the shipping cost to get it from his QTH in Pittsburg, Pennsylvania, to my QTH in Columbus, Ohio. Obviously (!!!), I accepted the offer and have never gone back on my word to keep and maintain the set. It looks and works like new – and even includes the original Hallicrafters shipping boxes for the receiver and transmitter. I am only the second owner of the SX-117, HT-44, and PS-150-120 (and the HT-45 and its matching P-45 Power Supply).

The HA-1 ‘TO Keyer came to me from a Hamfest as did the HA-8 Splatter Guard. The HA-10 LF/MF Tuner came via Bob, W9DYQ, friend from childhood and fellow collector and owner of two SX-117 and HT-44 stations. Bob has the Radio Industries Loudenboomer Linear Amplifier which preceded the HT-45. More about that story when we talk about the HT-45. (To wet your appetite for this story, Radio Industries was a division of Hallicrafters, based in Kansas City.)

The SX-117 Receiver enjoyed wide popularity – maybe a bit more than its mate, the HT-44 Transmitter. To this day, you can spot SX-117 Receivers in pictures of ham shacks around the world. There are also many SX-117/HT-44 pairs still in operation here and there. They are not hard to find – but ones in pristine condition are somewhat rare. They have all aluminum cabinetry construction and at the time of their manufacture the technology of getting paint to stick to aluminum was not well developed. Many of these radios have good, sound cabinets but flaking paint. I am very fortunate to have a set with nearly flawless paint. Perhaps that is more due to the care these radios get at W9MXQ than in them being painted any better than their sisters and brothers from the production line. Unlike today, in 1963 when the SX-117 was introduced, it was regular practice to have a receiver from one manufacturer and a transmitter from another. The system approach, introduced by Collins and the S-Line, started the trend to have a complete station with a single brand of radio and all accessories.

Today the SX-117 suffers from a lack of selectivity in competitive situations – recall my comments, above, about the “filtering” in the receiver. But, sitting in front of this set on a Sunday afternoon on a 40-meter rag chew is pure joy. Super audio on both sides of the circuit reminds me of what ham radio once was – and still can be. Listening to the golden tones of the SX-117 on CW must be experienced – as is the excellent, smooth CW keying from the HT-44. Give a listen if you have the opportunity!

Sincerest thanks to Bob, W9DYQ, for his assistance in this article.





### 3D printed parts for ham radio By Dan Romanchik, KB6NU

One of the things that I keep telling myself that I need to learn how to do is 3D printing. This morning, I ran across a couple more 3D printing projects for ham radio that I thought I'd pass along.

The first I found on reddit: 3D Printed Parts for Portable Tape Measure Yagi Designs ([https://www.reddit.com/r/amateurradio/comments/963br3/3d-printed\\_parts\\_for\\_portable\\_tape\\_measure\\_yagi/](https://www.reddit.com/r/amateurradio/comments/963br3/3d-printed_parts_for_portable_tape_measure_yagi/)). The summary on Thingiverse (<https://www.thingiverse.com/thing:3042505>), which is a website where "makers" share their designs, says:

These parts are made for use with 1-in. PVC pipe and 1-in. Harbor Freight tape measure steel. You can use electrical tape to attach the element holders to the side of the pipe, and use the driven element bridge to give structural rigidity across the driven dipole element. I have used this with up to 5 elements on 2m with good success. When not using the antenna, just pinch the elements to remove them from the holders, and store them INSIDE the tube! you can add some end caps to make this ultra portable. Use these parts with any of the multitude of tape measure YAGI design guides online.

To the right is a look at an antenna made with these parts: The element holders are attached to the boom with electrical tape in the photo above. While I haven't tried it, I'd suggest that the antenna might be a bit more robust if you could screw or perhaps glue the holders to the boom.

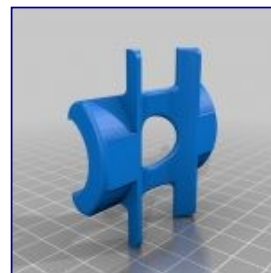
There are lots of other cool amateur radio 3D printing projects available on Thingiverse (<https://www.thingiverse.com/search?q=ham+radio&dwh=415b6d8da129c3c>). Browsing through the list quickly, here are just two that look like they might be useful to me:

- Soldering Fingers (<https://www.thingiverse.com/thing:1725308>). This project looks simple and quick.
- µBitx Case (<https://www.thingiverse.com/thing:2925336>). I still gotta do something with the µBitx I bought. This looks like it might get me started.

Last week, I attended a 3D printing class at our local maker space, All Hands Active ([allhandsactive.org](http://allhandsactive.org)), and now I feel like I can finally attempt a 3D printing project. I'm thinking about starting out with the simple Soldering Fingers project. If that goes well, I'll try a Raspberry Pic case and finally start using that in the shack. And, while these projects all seem pretty cool, I feel like I'm only scratching the surface.

Have any of you 3D printed anything cool for your ham radio projects? Is there another source of designs for ham radio 3D printed stuff besides Thingiverse?

-----  
When he's not 3D printing enclosures for his ham radio projects, Dan blogs about amateur radio, writes exam study guides ([www.kb6nu.com/study-guides](http://www.kb6nu.com/study-guides)), and operates CW on the HF bands. Look for him on 30m, 40m, and 80m. You can email him about your experiences with 3D printing at [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).





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### MEETING MINUTES

#### FOND DU LAC AMATEUR RADIO CLUB Minutes of FDLARC Monthly Meeting Monday, August 13, 2018



#### Call to Order

The meeting was called to order at 7:04 pm. With Dave McCumber N9WQ (President) presiding.

#### Introductions

All attendees introduced themselves.

#### Program: HF Mobile installations

Introducing Kevin Quick N9NAQ from Joliet IL. HF while mobile is very handy while traveling as you can stay on a single hf frequency and have qsos without having to keep switching to the next available repeater as you pass the next city. He refers to K0BG's book Bible on HF Mobile, also at K0BG.com.



He explains that as you change frequencies you have to re-tune the antenna. He tells about one way to do this is to use a "screwdriver" antenna. This actually has a motor from a battery screwdriver that raises and lowers the tuning coil to bring the antenna in resonance. An antenna for 40 meters should be  $\frac{1}{4}$  wavelength long, which would be about 33 feet. This would work excellent except for highway overpasses and power lines. Thus there has to be a way to shorten it. To enable this coils and capacitance are added to match the impedance. He explains how this is done and shows how this is done and shows different types of antennas.



Kevin also brought his car along for show and tell.

He also shows how to use rf chokes to reduce RF on cabled and eliminate interference.

Dave N9WQ gave Kevin \$40 for his transportation.

#### Approval of Meeting Minutes

A motion to approve the Minutes was made by Buddy KC9UVJ and seconded by Peter KB9WZD. The motion carried unanimously via a voice vote.

Joe K9VY mentioned that the club rooster should have a mark after a

#### Treasurer's report

The Treasurers Report was presented by Doug Schultz N9EZF.

A motion to approve the Treasurers Report was made by Buddy KC9UVJ and seconded by Dawn KD9CAW. The motion carried unanimously via a voice vote.

Truck Fund	0.00
Emerg. Services Fund	1,479.98
General Use Fund	4,878.79
Savings Account	25.00
Petty Cash Fund	<u>19.12</u>
Total	6,302.89
Repeater Fund	229.92





# FOND DU LAC AMATEUR RADIO CLUB

## — FDL 73 —



VOLUME 19 ISSUE 9

www.fdlhams.com September, 2018

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, August 13, 2018



There are bills for the porta-potty , and post office box. A motion to pay the bills was made by Buddy Larson KC9UVJ and seconded by Tom Powell KC9VXR. The motion carried unanimously via a voice vote.

#### Old Business

Tom Powell KC9VXR tells his story how he connected with the Red Cross and how he uses communication there .The most calls he gets there are for house fires .They have on the average two calls each month .They have a call down system to call the next available member. They are in need of more members you will need training , See Tom Powell for more information .

Doug Schultz N9EZF reported that the next testing session will be on Oct 13, 2018 at MPTC, Room O104.



Joe Scheibinger K9VY is working on setting the club up as a becoming a 501C3.

The brat fry will be held on Aug. 24/25, 2018 at the truck stop in Lomira. Doug Schultz N9EZF passed around a volunteer sign up sheet..

Buddy Larson KC9UVJ : The ARC will be holding the run-walk-roll at Lakeside Park and he needs some volunteers to provide communications for a couple of hours 10 -12 am. Contact Buddy KC9UVJ at [kc9uvj@gmail.com](mailto:kc9uvj@gmail.com)

The Race the Lake will be held on Aug 26.

Peter Fox KB9WZD said that he will no longer be a driver of the truck at the end of this season.

Tom Powell KC9VXR made a motion to investigate alternative to the truck. Tony Pass KC9QYR seconded it . The motion carried unanimously via a voice vote

There was a question about upgrading the non functioning "new " Yaesu " repeater. Yaesu has a \$300 cost for a working repeater. A motion was made to do this by Dave McCumber N9WQ , Jim Balthazor K9AIX seconded it. The motion carried unanimously via a voice vote.

#### Adjournment

A motion was made to adjourn by Peter Fox KB9WZD. The motion carried unanimously via a voice vote. 8:37 pm

The raffle # 554937 was won by Larry KC9RUE





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### 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](https://youtu.be/t3Ueh9IN5_U)

FARC - WWV Presentation [https://youtu.be/w3-DP9DEv\\_U](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](https://youtu.be/NnZ21O_6HvA)

FARC - NooElec [https://youtu.be/s\\_pxYkH4xds](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](https://youtu.be/giZcfQW_tpA)

FARC - The DZKit Ham Radio Kits [https://youtu.be/giZcfQW\\_tpA](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>

#### 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





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### NOTICES/ANNOUNCEMENTS

#### HAM Testing Session

The Volunteer Examiners of the Fond du Lac club will be holding Amateur License exams on Saturday, October 13, 2018 from 9:00 AM until Noon in Room O-104 at Moraine Park Technical College in Fond du Lac. If you have questions or want to reserve a spot please contact Doug Schultz at 920-922-3088 or via email at [schultz74@charter.net](mailto:schultz74@charter.net).



There's still plenty of time to crack the books and prepare to upgrade your ticket.



#### Club Nets

Sunday Evenings - Open to all

6:15 pm Ten Meter SSB Net-28.450 MHz

7:30 pm Two Meter FM Net-145.430 MHz

PL 97.4



#### FDL County ARES Net

Sunday Evenings

For ARES Team Members. Now combined with the Club Net at 7:30 pm.

ARES Coordinator: Todd Beay (AC9EX)



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## Free, For Sale or Wanted

### Upcoming HAMFESTS and Conventions From ARRL

#### 09/08/2018 | Ozaukee RC's 13th Annual Regional Fall Swapfest

**Location:** Cedarburg, WI

**Type:** ARRL Hamfest

**Sponsor:** Ozaukee Radio Club

**Website:** <http://www.ozaukeeradioclub.org>

**Learn More**

#### 09/28/2018 | Wisconsin State Convention (Ham Radio Outlet Superfest 2018)

**Location:** Milwaukee, WI

**Type:** ARRL Convention

**Sponsor:** Ham Radio Outlet

**Website:** <http://hamradio.com>

**Learn More**

#### 10/13/2018 | Wisconsin ARES/RACES Conference

**Location:** Wisconsin Rapids, WI

**Type:** ARRL Convention

**Sponsor:** WeComm, Ltd.

**Website:** <http://wi-aresraces.org>

**Learn More**

#### 11/03/2018 | MRC91 Milwaukee Repeater Club

**Location:** Milwaukee, WI

**Type:** ARRL Hamfest

**Sponsor:** Milwaukee Repeater Club

**Website:** <http://mrc91.org>

**Learn More**

#### 11/04/2018 | FCARC Swapfest

**Location:** Appleton, WI

**Type:** ARRL Hamfest

**Sponsor:** Fox Cities Amateur Radio Club

**Website:** <http://www.fcarc.club/hamfest.php>

**Learn More**

#### 01/05/2019 | 47th Annual Midwinter Swapfest

**Location:** Waukesha, WI

**Type:** ARRL Hamfest

**Sponsor:** West Allis Radio Amateur Club

**Website:** <http://warac.org>

**Learn More**

## Hamfests







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### 2018 CALENDAR

**Jan. 8, 2018**

FDLARC Monthly Meeting, 7:00 pm, MPTC A-112.

**Feb. 12, 2018**

FDLARC Monthly Meeting, 7:00 pm, MPTC A-112.

**Feb. 10, 2018**

License Exams, 9:00 am-Noon, Moraine Park Technical College in Room O-104  
Contact: Doug Schultz N9EZF



**Mar. 11 & 12, 2018**

Wisconsin QSO Party



**Mar. 12, 2018**

FDLARC Monthly Meeting, 7:00 pm, MPTC A-112.  
Annual Membership Drive-Contact Joe Scheibinger

**Apr. 9, 2018**

FDLARC Monthly Meeting, 7:00 pm, MPTC A-112.

**Apr. 14, 2018**

License Exams, 9:00 am-Noon, Moraine Park Technical College in Room O-108  
Contact: Doug Schultz N9EZF



**May 14, 2018**

FDLARC Monthly Meeting, 7:00 pm, MPTC A-112.

**May 18—20, 2018**

Dayton HAMFEST



**June 1—2, 2018**

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

**June 11, 2018**

FDLARC Monthly Meeting, 7:00 pm, MPTC A-112.



**June 8—10, 2018**

Walleye Weekend. Contact Joe Scheibinger K8VY

**June 23 & 24, 2018**

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



**July 9, 2018**

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

**July 22, 2018**

RMC Triathlon



**Aug. 13, 2018**

FDLARC Monthly Meeting, 7:00 pm, MPTC A-112.

**Aug. 26, 2018**

Race the Lake

**August 24-25, 2018**

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



**Sept. 10, 2018**

FDLARC Monthly Meeting, 7:00 pm, MPTC A-112.

**Sept. 21—23, 2018**

Fox Cities Marathon



**Oct. 8, 2018**

FDLARC Monthly Meeting, 7:00 pm, MPTC A-112

**Oct. 13, 2018**

License Exams, 9:00 am-Noon, Moraine Park Technical College in Room O-104. Contact: Doug Schultz N9EZF



**Nov., 12 2018**

FDLARC Monthly Meeting, 7:00 pm, MPTC A-112.  
Election of 2018 Officers

**Dec. 1, 2017**

FdL Parade of Lights, 4:00, Downtown



**Dec. 9, 2017**

License Exams, 9:00 am-Noon, Moraine Park Technical College in Room O-104  
Contact: Doug Schultz N9EZF



**Dec. 10, 2017**

Christmas Party:  
Lind's Contact

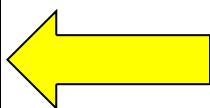
Jim and  
Buddy Larson KC9UVJ





First	Last	Call Sign	Dues
Annika	Kreis		
Barbara	Simon	W9MER	
Blend	Bowen	KC9VXV	
Brad	Freund	KC9QYP	
Brian	Turkiewicz	KC9LFR	
Buddy	Larson	KC9UVJ	
Chuck	Mahnke	K9HXL	
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	
Donna	Blend	KC9TFN	
Dot	Olig *	K9FDL	
Doug	Murray	KC9ZVT	
Doug	Wagner	KC0RNS	
Doug	Schultz	N9EZF	
Ed	Beltz	N9PJQ	
Ed	Sipple	W9VYO	
Ed	Steinfeld	KB1ZJK	
Edward	Frac	AA9WW	
Fernando	Salazar	KC9ZVX	
Gene	Olig *	KD9ZP	
Gene	Peterson	KD9IAG	
Gerry	Radtke	WA9GON	
Gregory	Schmude	KD9EHB	
Isaac	Lundberg	KD9FPG	
Jack	Heil	KG9IN	
James	Scovronski	N9WAM	
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	KC9YQS	
Lloyd	Vandervoort	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	

## FDL ARC ROOSTER



Name Sort



Call Sort



Paul	Bleuel	KC9NAA		Doug	Schultz	N9EZF
Paul	Tvrdy	N9KLK		Paul	Tvrdy	N9KLK
Peter	Fox	KB9WZD		Ed	Beltz	N9PJQ
Randy	Nelson	KC9MYG		Lloyd	Vandervoort	N9RPU
Ray	Grenier	K9KHW		Michelle	Lawrence	N9RQL
Reinholt	Aschmotat	N8VDH		Mike	Lawrence	N9UA
Richard	Jarzynka	KD9EMX		James	Scovronski	N9WAM
Rick	Robinson	N19Z		Jim	Cole	N9WAP
Ron	Keller	KC9YVL		David	McCumber	N9WQ
Scott	Kreis			Rick	Robinson	N19Z
Stan	Cram	A10M		Timothy	Braun	W9AAV
Steve	Smith	W9GPI		Steve	Smith	W9GPI
Ted	Gustavus	KD9IAH		Ted	Neuburg	W9LUQ
Ted	Neuburg	W9LUQ		Barbara	Simon	W9MER
Ted	Willett	W9NHE		Ted	Willett	W9NHE
Timothy	Braun	W9AAV		Ed	Sipple	W9VYO
Todd	Beay	AC9EX		Gerry	Radtke	WA9GON
Tom	Karrmann	KC9VZY		Mark	Forss	WD9CYM
Tom	Murray	N0HOR		Dave	Witt	WD9W
Tom	Powell	KC9VXR		Annika	Kreis	
Tony	Pass	KC9QYR		Debra	Florian	
Walter	Rueger	KC9WQ		Laura	Yates	
Walter	Drees	KD9JAD		Lorelei	Kreis	
				Scott	Kreis	

First	Last	Call Sign
Edward	Frac	AA9WW
Kyle	Ruesch	AB9AX
Todd	Beay	AC9EX
Stan	Cram	A10M
Jim	Balthazor	K9AIX
Nancy	Myers	K9ANA
David	Zittlow	K9DUI
Dot	Olig *	K9FDL
Chuck	Mahnke	K9HXL
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
Donna	Blend	KC9TFN
Dean	Choate	KC9TGM
Buddy	Larson	KC9UVJ
Tom	Powell	KC9VXR
Blend	Bowen	KC9VXV
Tom	Karrmann	KC9VZY
Walter	Rueger	KC9WQ
Laurie	Winchell	KC9YQS
Ron	Keller	KC9YVL
Doug	Murray	KC9ZVT
Dick	Finn	KC9ZVW
Fernando	Salazar	KC9ZVX
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
Gene	Olig *	KD9ZP
Mike	Keyes	KE7ES
Jack	Heil	KG9IN
Cully	Kowal	KS0D
Tom	Murray	N0HOR
Reinholt	Aschmotat	N8VDH
Doug	Schultz	N9EZF