

CQ CHATTER

SEPTEMBER 2023

VOLUME B23 • ISSUE 7

WOOD COUNTY AMATEUR RADIO CLUB

| | | |
|----------------|---------------|-------------------------|
| President | KG8FH | <u>Jeff Halsey</u> |
| Vice President | WE8TOM | <u>Tom Leingang</u> |
| Secretary | N1RB | <u>Bob Boughton</u> |
| Treasurer | KD8NJW | <u>Jim Barnhouse</u> |
| Board Members | WB8NQW/KE8QGV | Bob Willman/Roger Weith |

Minutes WCARC Meeting August 14, 2023

Jeff-KG8FH presiding

Present: Bob-N1RB, Jim-KD8NJW, Rex-KC8PFP, Roger-KE8QGV, Bob-WB8NQW, Eric-WD8LEI, Terry-KE8CVA, Bob-WD8LIC, Tom-WE8TOM, Norm-KE8WTG, Jeff-KG8FH, Russ-KE8PJM

Meeting called to order: by KG8FH at 7:30 with Pledge of Allegiance

Minutes: of the June meeting as published in the July issue of CQ Chatter were approved unanimously (NQW/PJM).

Treasurer's Report: Motion to approve (NQW/PJM) was passed unanimously.

Old Business:

- Eric (LEI) reported on recent ARES and AREDN activities. The tower on Linwood Road suffered a lightning strike, and took out several boards in the control circuitry for the ARES repeater system as well as the tower lighting and the backup generator. Eric has been able to repair them, and the system is more or less back up to normal, except that the repeater voting system still needs to be tested. He also attended a State Interoperability Meeting in Columbus where the main concern is the logistical effects of the eclipse next April. The AREDN tunnel

continued on p. 6

Net Check Ins-I

Aug 1

Traffic: 0

N1RB (NCS)

KD8NJW

KE8CVA

KG8FH

KE8WTG

KB8QEW

KE8PJM

KD8RNO

WE8TOM

W8LIC (10)

Aug 8

Traffic: 0

KG8FH (NCS)

KC8EKT

WB8NQW

KE8QGV

KB8QEW

N1RB

WE8TOM

KD8RNO

W8MSW

KE8CVA

WD8LEI (11)

Aug 15

Traffic: 0

KD8NJW (NCS)

KG8FH

KE8WTG/R

WD8LEI

WB8NQW

W8PSK

KD8VWU

KB8QEW

KD8RNO

WE8TOM

KE8QGV

N1RB

WD8ICP

Brain Teasers

1. Which of the following is a disadvantage of multiband antennas?
 - a.) they present low impedance on all design frequencies
 - b.) they must be used with an antenna tuner
 - c.) they must be fed with open wire line
 - d.) they have poor harmonic rejection
2. What does an FT8 signal report of +3 mean?
 - a.) it is three times the noise level of an equivalent SSB signal
 - b.) the signal is S3 (weak signal)
 - c.) the signal-to-noise ration is equivalent to +3 dB in a 2.5 kHz bandwidth
 - d.) it is 3 dB over S9
3. What is one reason to use an impedance transformer at a transmitter output?
 - a.) to minimize transmitter power output
 - b.) to present the desired impedance to the transmitter and feed line
 - c.) to reduce power supply ripple
 - d.) to minimize radiation resistance

September Contests

The contest lineup for the month of September is given below. Please note that the WARC bands (60, 30, 17 and 12 m) are never open to contesting.

| | | |
|----------------------------------|-----------------------|------------------|
| Sep 2-3 | <i>0000 to 2359 Z</i> | 160 m to 10 m |
| All Asian DX 'test-SSB | | SSB |
| Sep 2-3 | <i>1300 to 0400 Z</i> | 160 m to 10 m |
| Colorado QSO Party | | all modes |
| Sep 3-4 | <i>1800 to 0300 Z</i> | 160 m to 10 m |
| Tennessee QSO Party | | all modes |
| Sep 9-10 | <i>0000 to 2359 Z</i> | 80 m to 10 m |
| WAE (Europe) DX 'test-SSB | | SSB |
| Sep 9-10 | <i>1500 to 0300 Z</i> | 160 m to 10 m |
| Alabama QSO Party | | CW/SSB |
| Sep 16-17 | <i>1400 to 2000 Z</i> | 160 m to 10 m |
| Iowa QSO Party | | all modes |
| Sep 16-17 | <i>1200 to 0300 Z</i> | 160 m to 10 m |
| Texas QSO Party | | all modes |
| Sep 16-17 | <i>1600 to 0359 Z</i> | 80 m to 10 m |
| New Jersey QSO Party | | all modes |
| Sep 16-17 | <i>1600 to 2200 Z</i> | 80 m to 2 m |
| New Hampshire QSO Party | | all modes |
| Sep 23-24 | <i>0000 to 2359 Z</i> | 80 m to 10 m |
| CQ WW DX 'test-RTTY | | RTTY |

Net Check Ins-II

Aug 15 *continued*

WD8PIC

KE8CVA (15)

Aug 22 *Traffic: 0*

WB8NQW (NCS)

WE8TOM

KE8CVA

KG8FH

WD8LEI/M

KD8RNO

KD8NJW

W8PSK

KE8PJM

N1RB

KE8WTG

KD8VWU

K8DLF (13)

Aug 29 *Traffic: 0*

N1RB

KG8FH

KC8EKT

WD8LEI

WB8NQW

WD8LIC

W8PSK

KE8PJM

KE8WTG

KB8QEW

KD8RNO

N8VNT

KD8VWU

WE8TOM

KE8CVA (15)

Brain Teaser answers: (G) 1-d, 2-c 3-b

How Low Can You Go? The World Of QRP Operation

[Dan Maloney](#)

Newly minted hams like me generally find themselves asking, "What now?" after getting their tickets. Amateur radio has a lot of different sub-disciplines, ranging from volunteering for public service gigs to contesting, the closest thing the hobby has to a full-contact sport. But as I explore my options in the world of ham radio, I keep coming back to the one discipline that seems like the purest technical expression of the art and science of radio communication – low-power operation, or what's known to hams as QRP. With QRP you can literally talk with someone across the planet on less power than it takes to run a night-light using a radio you built in an Altoids tin. Now that's a challenge I can sink my teeth into.

Why QRP?

QRP takes its name from the Q-codes developed as shorthand by early Morse operators. QRP mean "Reduce power" or when posed as a question, "Shall I reduce power?" It has gradually morphed into a catch-all term that describes the whole field of low-power operation. Not surprisingly, there's no hard and fast rule as to what constitutes QRP, but like a lot of things in life, you know it when you see it. Generally, any radio capable of transmitting at 5 watts or less would be considered a QRP rig, although some argue for anything below 10 watts. In the end these limits are academic, because most QRP aficionados like to work with much lower power, typically only a watt or two. Extreme QRP, called QRPp, lives below a watt and sometimes is best measured in milliwatts; for some serious over-achievers, it's even measured in microwatts.

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WCARC Weekly Net

Tuesdays at 2100 all year

147.18 MHz 67 Hz PL

Net Control Roster

| | | |
|------------|-----------|---------------|
| <i>Sep</i> | <i>5</i> | <i>KG8FH</i> |
| <i>Sep</i> | <i>12</i> | <i>KD8NJW</i> |
| <i>Sep</i> | <i>19</i> | <i>WB8NQW</i> |
| <i>Sep</i> | <i>26</i> | <i>N1RB</i> |
| <i>Oct</i> | <i>3</i> | <i>KG8FH</i> |
| <i>Oct</i> | <i>10</i> | <i>KD8NJW</i> |

NEXT MEETING

Breakfast Meeting

Saturday

September 2

TIME: 9:00 AM

PLACE:

Frisch's Big Boy

E. Poe Rd. &

N. Main St.

Bowling Green, OH

10 meter Nets

Informal SSB group meets

Sunday @ 20:30 local on

28.335 MHz

Informal CW group meets

Tuesday @ 20:00 local on

28.050 MHz

Fusion Net

Thursday

@ 19:30 local

on 442.125 MHz

Wires-X Operators

welcome

Informal net

minutes from p. 1

controller at the Linwood site is still down. Eric also installed a Network Time Protocol server on the system.

- The Wood County EMA Director, Jeff Klein, would like to install some HF antennas on the Courthouse Annex roof to facilitate communications with Ohio ARES and other nodes in Columbus. Eric will organize a group with HF experience to scout out appropriate locations for installation of wire antennas, The group consists of:KE8QGV, N1RB, WB8NQW, and possibly KG8FH. The meeting is tentatively scheduled for Thursday, August 31 @ 1:30 pm. Eric will contact the group via e-mail.
- Eric also mentioned that a regional workshop on tornadoes has been scheduled for September 7, from 9 AM to 3 PM, at Olscamp Hall on the BGSU campus. The aim is to improve inter-regional cooperation between the NWS offices in Ft. Wayne, Detroit and Cleveland.
- Jeff announced that the Executive Committee met before tonight's meeting and approved the appointment of Tom, WE8TOM, as the K8TIH repeater trustee. He will take the reins as soon as the paperwork is processed by the FCC.
- In a discussion of future meeting dates, Jeff mentioned that the Sheriff's Training Room was not available for the business meeting date on the

second Monday of April, 2024. It was pointed out that this coincided with the date of the eclipse and would probably not be a good idea to schedule it on that date. After some discussion it was decided that a business meeting could be held on the second Monday in March (March 11th) and a breakfast meeting on the first Saturday in April (April 6), thereby simply swapping the dates for business and breakfast meetings. Motion was approved unanimously.

Jeff introduced a guest speaker, Roy Chase, from the Bowling Green LDS Church to speak on the Emergency Essentials Fair that they are sponsoring on Saturday, September 23, from 10 AM to 2 PM. The WCARC has been invited to participate with demonstration of our emergency communications capabilities. Jeff would like to set up an AREDN mesh demo since the WCHospital node is quite close, as well as a demo of the available repeaters. The following people volunteered to participate: Jeff-KG8FH, Bob-N1RB, Roger-KE8QGV, and Tom-WE8TOM.

Adjournment: at 8:35 PM (PJM/QGV)

An excellent program was presented by Bob-WD8LIC, on a radial-less vertical antenna based on the Coastal 40 antenna developed by K4DGO. Bob uses it as a portable for camping. ■

September Contests-cont.

| | | |
|--------------------|----------------|---------------|
| Sep 23-24 | 1200 to 1200 Z | 160 m to 10 m |
| Maine QSO Party | | all modes |
| Sep 30-Oct 1 | 1200 to 1200 Z | 80 m to 10 m |
| UK/EI DX 'test-SSB | | SSB |

September Hamfests

September 10 Findlay RC hamfest. Hancock County Fairgrounds, Findlay, OH
web: www.findlayradioclub.org/hamfest

September 17 Adrian ARC hamfest. Lenawee County Airport, Adrian, MI
web: www.w8tqe.com

Fair Radio Sales Shutting Its Doors

from ARNewsline

Fair Radio Sales, a well-known supplier of surplus electronic military equipment for more than a half-century, has announced that it is closing its doors at the end of the year. Its 30,000-square-foot location in Lima, Ohio, has been a destination for local radio amateurs and those making a pre-Hamvention visit each spring in Ohio. The company, founded in 1947, has been in its second-generation of ownership under Phil Sellati, along with his late brother. ■

FOR SALE:

MFJ-998 Legal Limit Autotuner

*NEVER Used (Hooked up
once)*

Asking: \$500.00

**Contact KG8FH at:
jhalsey@woh.rr.com**

QRP from p. 4

Why would anyone bother with handicapping themselves with such low power from the outset? Most commercially available rigs, like the Icom IC-7200 sitting in my shack, are capable of putting out 100 watts, and with even a marginal antenna I can make contacts around the world without much effort. If I wanted to I could attach a linear amplifier and start blasting out a kilowatt or more. But amateur radio operators in the USA are required by the FCC to “use the minimum transmitter power necessary to carry out the desired communications”. So technically, if your rig is dialed up to 100 watts but you’re operating under conditions where 5 watts would do, you’re breaking the law. More importantly, though, it’s not good operating practice, and it contributes to QRM, or man-made interference. With the ever-narrowing slivers of spectrum allocated to amateurs getting more and more crowded, it’s just not very neighborly. Learning how to make a contact with the power turned way down is a great tool to have in your arsenal.

But underneath the neighborliness and good spectrum hygiene, there’s an even better reason to make QRP contacts: because you can. Anyone can get their license, spend some dough on a transceiver, string a simple dipole antenna up in some trees and start yapping away at 100 watts. But a QRPer who can make the same contact using a

twentieth of that power, and do so with a pocket-sized radio powered by a 9-volt battery? That shows skill and a deep understanding of radio. I think that’s the attraction for me.

QRP Gear

Most commercially available high-frequency (HF) transceivers are capable of being dialed back to QRP power levels, so chances are pretty good that most hams already have the gear needed to work QRP. And there are dedicated QRP rigs out there as well – Elecraft makes [some sweet QRP radios](#) with all the bells and whistles. But part of the allure of QRP is building your radio, and that’s what really fascinates me about the field. I’ve always had a pretty good handle on digital electronics, but analog circuits always seemed harder to grok. And RF circuits are just the stuff of wizards and demigods in my book. I want to change that, and I think being able to build my own transmitter would be a real hoot, and being able to understand the circuit at a really deep, fundamental level would be a game-changer for me.

With that in mind, where does one start with a homebrew QRP project? Unsurprisingly, the internet is chock full of plans and kits for everything from [full-featured QRP rigs](#) that can work single-sideband (SSB) and continuous wave (CW) modes to tiny CW-only transmitters that fit in an Altoids tin or even an old tuna can. If you get adventurous, you might

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QRP from p. 8
even try [building a QRP rig out of the guts of a cast-off CFL lamp](#).

The Altoids tin builds are a special sub-specialty of QRP – packable radios. With a pocket-sized radio, a few batteries, and a coil of wire for an antenna thrown into a backpack, you can communicate with the world from anywhere your feet can take you. This can prove handy, as it did for a young QRPer canoeing in Canada who wanted to reach his girlfriend in Ohio. Out of cell range but equipped with a 5 watt QRP rig, he made contact with a ham in Germany who sent an email to the young lady to let her know her boyfriend was alright and thinking of her. A roundabout route for sure, but QRP skills can be practical as well as fun.

One thing you'll notice when you're shopping for a QRP rig is the prevalence of CW-only transceivers. Continuous wave is the simplest mode of radio communication, using a radio signal of constant amplitude and frequency that's either on or off. CW radios are simple to build and simple to run, and being a very low-bandwidth mode, CW is often able to punch through where more complex modes can't, a decided advantage when you're working QRP. The downside: you've got to learn Morse. That's on my personal life list of skills, and when you think about it, how hard can it be to memorize about 40 symbols? Considering the doors it opens up, it's a worthy investment.

Records are made to be broken

So just what's possible with QRP? Are you going to be stuck making contacts across town? Or can you really reach out and touch someone across the planet? We've already seen that a Canada to Germany contact with 5 watts is possible, but how far can we stretch the limits of power and distance? As it turns out, pretty far. The current QRP miles per watt record is 1,650 miles from Oregon to Alaska on the 10-meter band using 1 microwatt! That's the equivalent of 1.6 billion miles per watt. To put that feat into perspective, [Pioneer 10](#) achieved "only" 850 million miles per watt before the space probe finally died in 2003, and it took [a ground antenna that might not please the neighbors](#) to pull that off. A little less extreme is the copying of a 40 microwatt CW beacon run by the [North American QRP CW Club](#) at 546 miles, or 13.5 million miles per watt. Just recently, [the first solid-state rig to make a transatlantic contact](#) entered the ARRL museum collection. The two-transistor radio sported 78 milliwatts on the 20-meter band; at a mere 47,500 miles per watt, it's a more typical example of what QRPers accomplish every day.

Extreme examples aside, contacts of thousands of miles on just a few watts are happening all the time as hams push their rigs and their skills to the limit. You don't have to shoot for a record to enjoy QRP – just set your sights low and give it a try. ■



2023 FINDLAY HAMFEST

Vendor set-up 6AM.
Doors open at 8AM.

SUNDAY, SEPTEMBER 10

Hancock County Fairgrounds
1017 E. Sandusky St., Findlay, OH 45840

41.036717 -
83.631166

General Admission STILL JUST \$10
\$20 Vendor Table (\$15 each additional table)
Each Flea Market Space \$10
\$15 Overnight Fee

CONTACT US:

Talk In: 147.15+ (PL 88.5)
444.15+ (PL 88.5)

Phone: 419-423-3402

www.findlayradioclub.org/hamfest
hamfest@findlayradioclub.org



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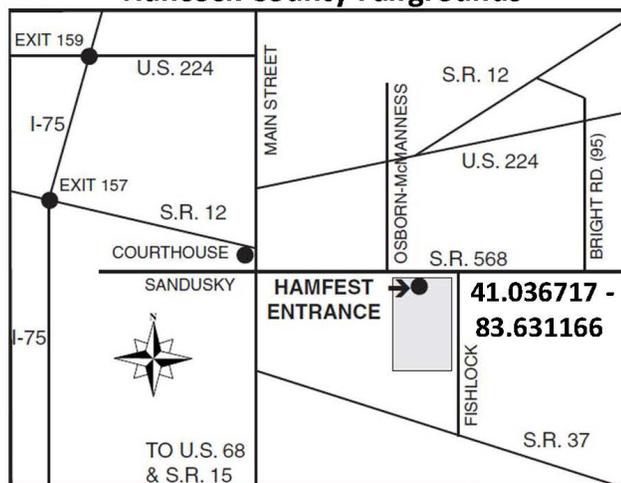
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Hancock County Fairgrounds



**WOOD COUNTY ARC
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43402**

