



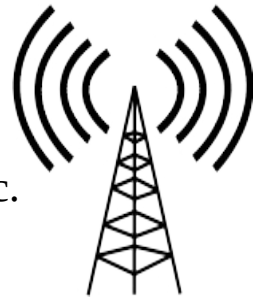
AFFILIATED

Printed Circuit

– May/June 2023 –

Published by the Southwest Iowa Amateur Radio Club Inc.

SWIARC meets the 4th Thursday of every month at the Loess Hills Red Cross Chapter
Charles E. Lakin Human Services Campus
705 N. 16th Street Council Bluffs, IA 51501



Visit us at <http://www.swiradio.org>



The South West Iowa Amateur Radio Club's Annual Hamfest was held on March 4th 2023 in McClelland, Iowa and what a fun time everyone had! Even Les WBØKFK from D&L Antenna had a good time and he didn't have hardly a minute to sit back and soak up the good weather that Mother Nature gave us for Saturday.



Les WBØKFK from D&L Antennas was kept busy

You could find just about anything that you might want in your shack from brand new rigs to many good condition used and needing some TLC pieces to warm your solder irons up on.

Cont. Page 2+3

The Action 2023

- May 6, 13, 20, 27 **Saturday Breakfast**
8-930am **Sugar's Diner***
- May 6 **Heartland Hams Monthly Breakfast**
9-1030am **Toby Jack's Mineola Steak House***
- May 13th **Lincoln Hamfest/**
8am-3pm **Nebraska ARRL Convention**
- May 25 **SWIARC Club Meeting**
7-8pm **Red Cross Building***
- Jun 3, 10, 17, 24 **Saturday Breakfast**
8-930am **Sugar's Diner***
- Jun 3 **Heartland Hams Monthly Breakfast**
9-1030am **Toby Jack's Mineola Steak House***
- Jun 17 **International Museums on the Air**
10am-2pm **see page 4 for more info**
- Jun 22 **SWIARC Club Meeting**
7-8pm **Red Cross Building***
- Jun 24-25 **Field Day**

A D D R E S S	Sugar's Diner	Red Cross CB	Tobey Jack's
	2725 E	705 N. 16th	408 Main St,
	Kanesville Blvd,	Street Council	Mineola, IA
	Council Bluffs, IA	Bluffs, IA	51554
	51503	51501	



What: ARRL FIELD DAY 2023

When: 2023 ARRL Field Day is June 24-25

Where: Lake Manawa (Same as Last Year)

Time: 1800 UTC Saturday - 2059 UTC Sunday.

Rich WØZQG took these pics with him home to remember what he passed on, maybe next year!



Figure 1: IC-575 6&10 Meter rig



Figure 2: Ten-Tec HF and matching power supply; a Big rack mount Astron, and 2 Kenwoods



Figure 3: You Remembered My Money, Right !



Figure 4: Derek WØTYG and Greg NØGR Drawing Grand Prize Winner



Figure 5: Yaesu FT-5 H/T Grand Prize Winner DON WØAF



Figure 6: The Youngest Winner is Elwood (NØTYET), Notice the Book's Title!



Figure 7: The Hall was filling up rapidly right at 8AM as good weather and good friends gave a very good reason to get out of the house and congregate.



Figure 9: Another Drawing Winner !
So many too choose from!



Figure 8: Joel KEØQGD kept everyone's whistle wet and handed out energy foods!

Thanks Joel

**SWIARC
2023**

WØAF

KCØIHV
KCØVEP
NØTYET
WØJRN
KDØBWK
KEØWYL
KCØVEP
KFØIQL
KRØN
KRØN
WØAF
WAØVJL
KCØYKO
KØNWJ
KFØKCH
WØJRN
WAØVJL

HAMFEST DRAWING WINNERS

Grand Prize Winner

Yaesu FT-5 H/T

How to get on HF Book
Hot Chase and Confirm DX Book
Pass Your Amateur Radio Tech Book
Pass Your Extra Book
Pass Your Extra Book
Pepper Communication Book
Repeater Directory 2023
N3JFP Logging Software
ARRL 25
ARRL 25
ARRL 50
Alpha Antenna 100
Alpha Antenna 100
Alpha Antenna 100
Alpha Antenna 100
Alpha Antenna 100
DX Engineering

Thanks to all the Volunteers and Guests that contributed to making the SWIARC Hamfest 2023 a huge success!

SEE YOU ALL NEXT YEAR !

What Is “73” and can I use “99” on the Air

As a ham who communicates thru cw, who would better know the human tendency to shorten our conveyance of talk. Well the early ages of Telegraphy was no different, imagine sitting in front of your keyer all day tapping out and counting the ‘Dots and Dashes’ to write down. So the shortcut way to express words was agreed upon by the many private telegraph companies that connected their wires together across the United States in the early days.

1857 The first use of the code 73 was documented in the April 1857 issue of “The National Telegraphic Review and Operators Guide” and used the meaning of ‘My Love To You’.

1859 The succeeding years saw the definition change. *”The National Telegraph Convention” changed it to become a ‘Friendly Word between Operators’.

*(No Reference to the convention was found in any text other than online stories)

1859 The Western Union Company set what is known as the ‘92 Code’, a standard of numerical shortcuts for telegraphers. The definition of 73 changed it again from a flowery meaning of ‘Accept My Compliments’ to ‘Best Regards’.

1860 Many translations ensued during this time:
to 1) G.M. Dodge’s “The Telegraph Instructor
1900 (©1899)” uses 73 as simply ‘Compliments’.

2) “The Twentieth Century Manual of Railways and Commercial Telegraphy(©1902)” [Whew} Text Body uses ‘My Compliments to You’ but the Glossary lists it as ‘Accept My Compliments’

1908 ‘The Dodge Manual’ gives it today's general definition of ‘Best Regards’.

2023 ‘Best Regards’ has remained the definition of 73 ever since but in practical use today is it being intended more and more as a ‘Friendly Word Between Operators’

1859 WESTERN UNION "92 CODE"			
1	Wait a minute.	25	Busy on another wire.
2	Very Important.	26	Put on ground wire.
3	What time is it?	27	Priority, very important.
4	Where shall I go ahead?	28	Do you get my writing?.
5	Have you business for me?	29	Private, deliver in sealed envelope.
6	I am ready.	30	No more - the end.
7	Are you ready?	31	Form 31 train order.
8	Close your key, stop breaking.	32	I understand that I am to
9	Priority business. Wire Chief's call.	33	Answer is paid.
10	Keep this circuit closed.	34	Message for all officers.
12	Do you understand?	35	You may use my signal to answer this.
13	I understand.	37	Inform all interested.
14	What is the weather?	39	Important, with priority on thru wire.
15	For you and others to copy.	44	Answer promptly by wire.
17	Lightning here.	55	Important.
18	What's the trouble?	73	Best Regards.
19	Form 19 train order.	77	I have a message for you.
21	Stop for meal.	88	Love and kisses.
22	Wire test.	91	Superintendent's signal.
23	All stations copy.	92	Deliver Promptly.
24	Repeat this back.	134	Who is at the key?

Today, amateur radio operators still use codes 73 and 88 regularly, and -30- is used in journalism, as it was shorthand for "No more - the end". The Young Ladies Radio League uses code 33 to mean "love sealed with friendship and mutual respect between one YL [young lady] and another YL" or simply "hugs."

A once-used but unofficial code ‘99’ meant "go to H#&&". The other codes have mostly fallen into disuse.

73 Rich KØRWJ

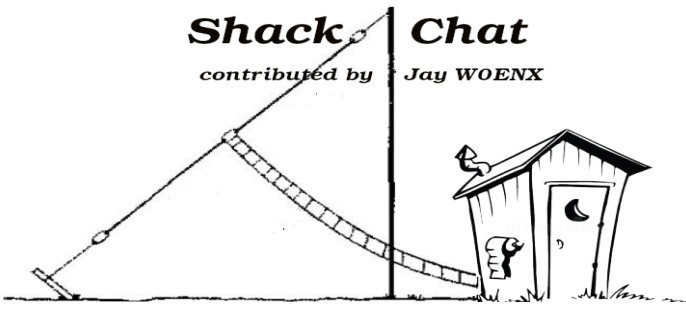
International Museums on the Air

An Amateur Radio Special Event Taking Place on the Weekend of June 17th - 18th 2023

Support the Des Moines Radio Amateurs' Association transmitting as WØAK from the Fort Des Moines Museum and Education Center on Day 1 only.

Shack Chat

contributed by Jay WOENX



Thoughts on the Panamax Power Conditioner Line-up

On the six meter net the other day, I mentioned the Panamax power conditioner I obtained through an ebay seller. The Panamax M5300-PM uses a total of seventeen blue LEDs as indicator lights and meter backlighting. Unfortunately the various Panamax power conditioner models are known for an inordinately high LED Indicator Light failure rate. Because of the high failure rate of the bank protection INDICATOR LEDs people tend to think it means a failure of those circuits which isn't true in the vast majority of cases.



Have **YOU** a tidbit of Shack Chat!
Share with your fellow hobbyist!
email to: newsletter@swiradio.org

Hams helping Hams !

SWIARC ONLINE



Call Sign License Search Sites!

[FCC Callsign Lookup](#)



[ORZ Callsign Lookup](#)



[WM7D Callsign Lookup](#)



[RadioQTH Lookup by Zip Code](#)



SWIARC REPEATERS and NETS:

Club Repeaters

Primary Club Repeater: 2M @ 146.820 R- No PL

SWIARC digital C4FM 442.225 PL 136.5 Wires-X connected.

Club Nets

146.82 Tues. OPS Net 9:00 pm - 10:00 pm

146.82 Wed. Ragchew Net 9:00 pm - 10:00 pm

146.82 Sat. Swap Net 12:00 pm - 1:00 pm

More Local Nets here: <https://swiradio.org/ants/>
and
a clippable list on Page 9

ARC Newsletter Publications from around the US.

This Name from the Austin Texas ARC

AARC OVER

Keeping
Austin
Wireless



for
100
Years!



Submit an article to the SWIARC Printed Circuit

We encourage your involvement. Share your stories, wit, knowledge, experience, and upcoming events here. Submit your articles at a SWIARC Meeting, or to newsletter@swiradio.org or SWIARC PO Box 661 Council Bluffs, Iowa 51502. Please use this email address to also make requests for newsletter re-prints and your feedback of the newsletter.

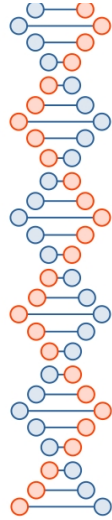
Antenna Propagation Patterns

SWIARC April 27th Meeting Presentation

Program Review: Rich KØRWJ presented a power point slide show on the propagation patterns of different popular antennas used in the Amateur Radio Hobby.

In plain English, propagation is signal reach.

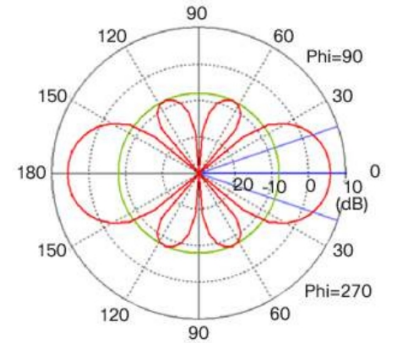
Let's take a look at a few of the different antenna designs that are commonly played around with in this hobby of ours today.



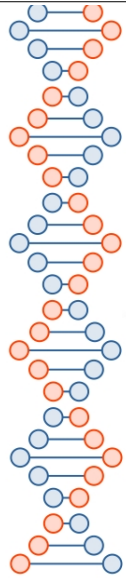
Antenna Propagation Patterns 1.0.0.1/2

Types of Antennas

- 1. Dipole
- 2. J-Pole
- 3. Yagi
- 4. Log-Periodic
- 5. EFHW



1

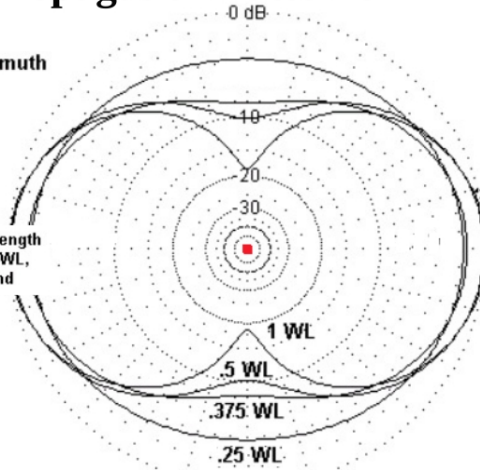


Antenna Propagation Patterns

• **Dipole Antenna**

Radiation pattern of half-wave dipole at different heights

Azimuth and Elevation Plots of a 1/2-Wavelength Resonant Dipole at Heights of 1/4-WL, 3/8-WL, 1/2-WL, and 1 WL Above Average Ground



(Short Dipole being considerably less than 1/2 wavelength)

Does Height Make a Difference ??

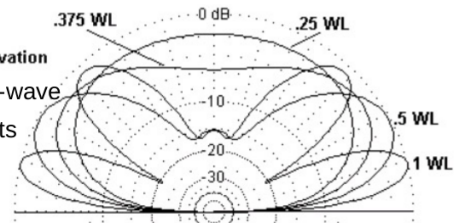
Yes, this shows a pattern difference for 1/4, 3/8, 1/2 and 1 wavelength in height above ground.

A Top-Bottom sliced view of height differences above ground plane.



Antenna Propagation Patterns

- **Dipole Antenna**
- Radiation pattern of half-wave dipole at different heights

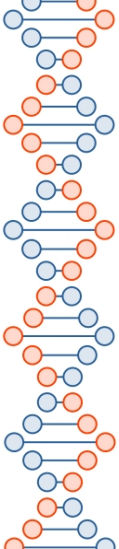


Azimuth and Elevation Plots of a 1/2-Wavelength Resonant Dipole at Heights of 1/4-WL, 3/8-WL, 1/2-WL, and 1 WL Above Average Ground

6

Antenna Propagation Patterns

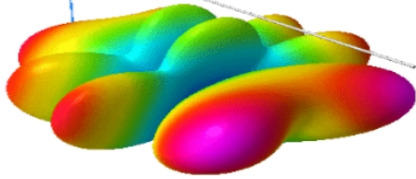
April 27th Meeting Presentation cont.



Antenna Propagation Patterns

Multiband 60-10cm End-Fed Half-Wave (EFHW) Antenna - (20m band performance figures)

- End Fed Half Wave Antenna
- 1/2 Wavelength above
- Real Ground



Antenna Apex @ 1/2 WL above real ground

Power Gain (TX) :	Approx. 8.1 dBi
RDF (RX Gain) :	10.3 dBi
Radiation Efficiency :	Approx. 61-62%

17

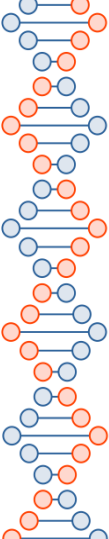
Again the height above the Ground Plane changes the pattern.

This is 1/2 wavelength above Ground.

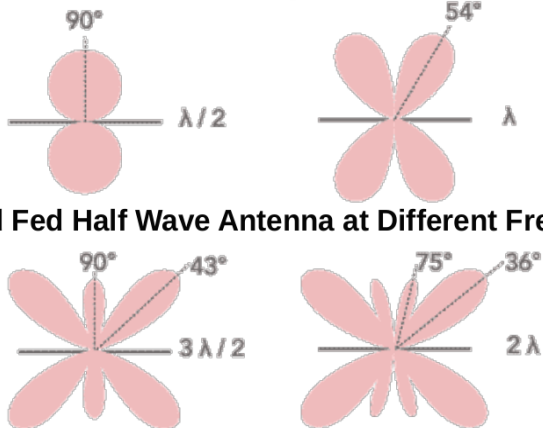
How about frequency?

One point to remember about the end fed half wave antenna is that the radiation pattern will change according to the band on which it operates and hence the number of half wavelengths it uses.

As the name indicates the EFHW antenna is half a wavelength long on the **lowest band of operation**.



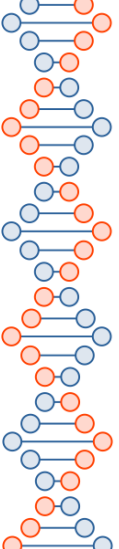
Antenna Propagation Patterns



- End Fed Half Wave Antenna at Different Frequency's

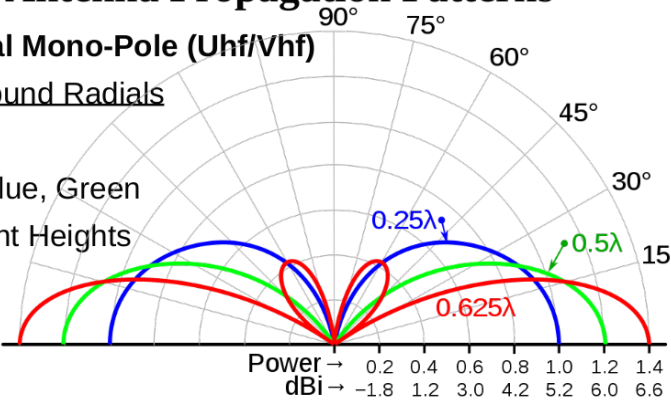
Same antenna length but different Band Wavelengths

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Antenna Propagation Patterns

- Vertical Mono-Pole (Uhf/Vhf)
- No Ground Radials
- Red, Blue, Green
- Different Heights



Power → 0.2 0.4 0.6 0.8 1.0 1.2 1.4
dBi → -1.8 1.2 3.0 4.2 5.2 6.0 6.6

So the pattern of a monopole with a perfectly conducting, infinite ground plane is identical to the top half of a dipole pattern.

20

Height of a Vertical Mono-Pole has an effect on the propagation pattern as observed in the pattern we're seeing now.



Remember This Council Bluffs Entity

Alan H. McMillan,(sk) W0JJK:

Created by The ARRL Letter, Vol 21, No 05 on 2002-02-07

Alan McMillan, W0JJK,
of Council Bluffs, Iowa, died January 15,
2002. He was 71.

An ARRL member for more than 50 years,
McMillan was perhaps best known to an
earlier generation of amateurs as the sales
manager for
World Radio Labs (WRL), where he also
contributed to the design of the Globe series
of transmitters. Later, he worked on Galaxy
radios--also part of the ham radio line offered
by WRL's Leo Meyerson, W0GFQ. After
retiring from WRL, McMillan founded Hobby
Industries selling ham gear and until his death
operating Hi-Manuals,

<http://www.hi-manuals.com/HomePage.htm>, which continues to offer reprints of operating and
service manuals for older ham gear.

Source:
The ARRL Letter Vol. 21, No. 5 February 1, 2002

Hi Hobby
Industry

H.I. is having an 8¢ SALE – to help you shop by mail, this and every
month. 8¢ (for a stamp) will buy any help that I can provide to make your
hobby more enjoyable. How can I help YOU?

The H.I.-SAVINGS PLAN can save you big money too. Ask about it!
73,

ae

Al McMillan, W0JJK

Bank-Americard
Master-Charge

Phone (712)323-0142 (Noon/5PM, Tues. Sat.)
Box 864 Council Bluffs, Iowa 51501

INTERNET ARCHIVE
waybackmachine
http://www.hi-manuals.com/
178 captures
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S.W.I.A.R.C.

Join the Club!

SWIARC club dues are \$20/year for 2023. You may bring a check to any 4th Thursday club meeting, or send it to the club address:

SWIARC INC.

PO BOX 661

COUNCIL BLUFFS IA 51502

Dues for students are half price per year.

Club Officers

President Derek W0TYG

president@swiradio.org

Vice President TBD

vicepresident@swiradio.org

Secretary Rich WA0ZQG

secretary@swiradio.org

Treasurer Greg N0GR

treasurer@swiradio.org

StationTrustee Chris KF0FBL

repeater@swiradio.org

Paul WB0GXD (Assistant)

Club Committees

Repeater Chris KF0FBL

repeater@swiradio.org

Paul WB0GXD (Assistant)

Field Day

fieldday@swiradio.org

Hamfest Derek W0TYG

hamfest@swiradio.org

Other Contacts

Ham Testing

testing@swiradio.org

Estate Sales

estates@swiradio.org

Newsletter Rich K0RWJ

newsletter@swiradio.org



More Local Nets

Sunday

8:00 P.M
9:00 P.M

144.25 2M SSB
146.94

Heartland Hams
Aksarben ARC

Monday

7:00 P.M.
08:00 P.M
09:00 P.M

145.29
147.39 PL: 131.8
146.94

Heartland Hams ARES informal net
Bellevue ARC
Aksarben ARC Chat Net

Tuesday

07:00 P.M
09:00 P.M

147.36
146.82

QCWA Net, Chapter 210
(seasonal, October through March).
K0SWI SWIARC Tuesday OPS Net

Wednesday

07:00 P.M
08:00 P.M
09:00 P.M

146.67
147.39 PL 131.8
146.82

Dodge Co. Ne. ARES
Mid-America Council Radio Scouting
Net
K0SWI SWIARC

Thursday

07:30 P.M
08:00 P.M
08:00 P.M
08:00 P.M
09:00 P.M

145.31
28.35
144.25
146.36
28.305

Lincoln Ne. SATERN Net.
10-Meter SSB Net.
2-Meter Simplex U-SSB Net.
Heartland DX Ass.
10-Meter Net.

Friday

Saturday

09:00 AM
12:00 PM
7:00 P.M
08:30 P.M

146.775
146.82
145.29
3.921.00

Pawnee ARC
K0SWI SWIARC Swap Net
Heartland Hams Tech. net
QCWA Chapter 20.

Want Other Nets listed ? Let me know, email newsletter@swiradio.org

Hey Fellow Hams

Let's put together a "Beacon" Lists for local Ham use ?

Send me your Beacon Knowledge and I will publish it in a future Printed Circuit issue.

newsletter@SWIRADIO.org



Dear Dr IN:

I need a 6.1v Zener diode for a project, and don't have one and also not much money to spend. Got any ideas for me?

Dear Spendthrift:

Zeners come in assorted voltages typically 3 to 30 or more, and in some high power models over a hundred Volts.

In your case you could substitute 8 or 9 regular silicon diodes or two LEDs in series. LEDs typically operate at 2 ½ to 4 Volts so test a couple to see if you can find a pair that result in around 6V. (The rest of the circuit can probably be adjusted if you're off half a volt or two.)

(You know to test them you use like, 12V and a resistor - 2 to 10k - in series with the diodes.)

Dear Dr IN:

The other day someone asked if I have 'Vara FM'. Is it contagious?

Dear Contagious:

Vara is the latest contagion in the high speed data communications modes, but don't worry a strong prescription from the doctor for over the counter software will get you feeling better in no time!

VARA is a very fast, relatively inexpensive digital mode.

Cont. Column 2

Plain 'VARA' usually means VARA on HF, or SSB. 'VARA FM' is on VHF/UHF via FM

Very roughly, for very strong signals, VARA FM NARROW is 18 times faster than packet.

Matt **ALØR** reports the Omaha/Council Bluffs area currently has VARA services thru a couple of frequencies .

VARA FM nodes are being added in the metro area. ALØR-9 runs in Valley and ALØR-7 is located near 80th and Center with both operating on 145.07. The **WOZZK**-10 Winlink gateway located in Papillion and KDØIVV-10 gateway near Glenwood operate on 145.03.

The ALØR nodes are collocated with Winlink gateways, ALØR-10 and ALØR-8, providing highspeed Winlink service. ALØR-10 is also collocated with the HF RMS ALØR, if out of area radio only messaging is desired.

Look for the complete story on VARA services by Matt ALØR in the next PRINTED CIRCUIT edition...

SWIARC Club Meetings

4th Thursday of the month at the Charles E. Lakin Foundation, Red Cross Building 705 N. 16th Street Council Bluffs, IA 51501



CORES2 New FCC Online Licensing System

**Register in CORES2 to gain online access and manage your FRN(s).
or Renew Your License**



PUBLIC NOTICE

Federal Communications Commission
45 L Street NE
Washington, DC 20554

News Media Information 202-418-0500
Internet: www.fcc.gov
TTY: 888-835-5322

DA 22-508

Released: May 27, 2022

OFFICE OF MANAGING DIRECTOR WILL DECOMMISSION LEGACY COMMISSION REGISTRATION SYSTEM ON JULY 15, 2022

MD Docket No. 10-234

The Office of Managing Director will decommission the Federal Communications Commission (FCC or Commission) Legacy Commission Registration System (CORES) (Legacy CORES) on July 15, 2022.¹ The current version of CORES (called CORES2 herein and found at <https://apps.fcc.gov/cores/userLogin.do>) has been in use since 2016 and should be used to register for or maintain an FCC Registration Number (FRN).² Using CORES2 for FRN-related transactions requires FRN registrants to set up an account with a unique username (by providing a valid e-mail address)³ and password to associate with their existing or new FRN(s).⁴ The FRN registrant's email address is then established in the system as their username. **Users already registered in CORES2 can continue to manage their FRNs in CORES2 without change. No additional actions are required for CORES2 users.**

Legacy CORES will be retired on July 15, 2022 at 6 pm.⁵ Once Legacy CORES is retired, users will be unable to make any changes to their FRNs in that system, including resetting their passwords. Users should be aware that they will need to register in CORES2 to gain online access and manage their FRN(s). See below for help with FRN registration in CORES2.

For Help with Registering in the FCC CORES2 System

CORES2 is available at <https://apps.fcc.gov/cores/userLogin.do>.

Before registering for or managing an FRN in CORES2, users that have not established their username and password must first **create an account** by entering their username (i.e., e-mail address) and a password on the FCC User Registration System webpage: <https://apps2.fcc.gov/fccUserReg/pages/createAccount.htm>.

Detailed information about the impact of decommissioning Legacy CORES and the transition to CORES2 can be found at: <https://apps.fcc.gov/cores/html/legacyCoresDecommission.html>.

For additional support, please visit the FCC Registration Help Pages.

You can also call the FCC Licensing Hotline, (877) 480-3201 Option 1, or visit the [e-support page](#).

SWIARC MEETING

Minutes 02/2023

The meeting started precisely at 7PM with the pledge and introductions. Pres Derek TYG had a camera, mike, and audio mixer set up for those at home checking in through Zoom.

Derek W0TYG, W0AF, N0BHB, Bob NE0CQ
Bill FJR, Chris FBL, Greg NOGR
Mark KF0GVT, Paul GXD, Clay KF0HEU
Rick KF0IQL, Jim W0JRN, Norm JYD
Joel KE0QGD, Rick RLR, Rich RWJ
Dan TDW, Dennis VJL, Greg KC0VTO
Wayne KN0WDJ, Suz WYL, Rich ZQG

Paul GXD then gave us a program on the voter used on .82 detailing how it selects the best input, main Simms St. site or IWCC receiver.

Treasurer's Report

Greg NOGR reported a balance of \$7,250 which means we haven't yet spent the nearly \$5k authorization to put up an antenna for .225.

Repeater

Chris FBL reported an audio problem with .82 was a broken lug on a pot at the IWCC site. Access to the main Simms St site is difficult so we'll not do anything to .82 (like reprogram it) that might cause a problem requiring a visit. We are collecting equipment (backup repeater etc.) to put up a 'new' .82 at a new site (see recent Minutes for news of leaving Simms St site). We have dups (extras) for everything except the \$2k **TxRx brand** duplexer and \$1k antenna.



Discussing a new site for .82, Rick RLR asked if we could buy our own tower. Dan TDW said a site out by McClelland is available to buy for \$45k and a 200 ft guyed tower would be \$30k.

Note: That pic in col. 1 is our cans in yr 2002.

March Hamfest

Derek publicized the fest on a DMR net. We decided kids 12 and under get in free, and when Rich RWJ asked about food Joel QGD stepped up to say he has a large coffee maker.

Late Note: Joel QGD set up a 'free' kitchen with OJ, coffee, and donuts, collecting free will donations of over a hundred bucks for us.

New Business

Rick KA0RLR, this year's **Field Day** Chmn, says it will likely be at **Lake Manawa** again and he is contacting the state Ranger for permission.

Rick RLR is also doing a program on Emcomm next month (March). Jim W0JRN who is the ARES coordinator for Nebraska, and Greg KC0VTO, Douglas Co EC, will assist.

Meeting adjourned at 8:46 PM.

Minutes by Club Sec'y, Rich WA0ZQG

Program Review

Paul GXD had a power point slide show on the **LDG** brand **RVS-8** eight channel voter used on the .82 repeater located at the Simms St site. We of course use only 2 of the eight inputs.

Audio from both the main .22 receiver and remote site out at IWCC are compared for noise content (at frequencies above normal audio, say around 7 to 9 kc). After a suitable delay, a second or two, the channel with lower noise is selected. A certain amount of hysteresis prevents rapid back and forth switching in the case of 'picket fencing' from a mobile signal.

Paul also mentioned our 'cans' at the Simms site which allow separation of the 2 signals, .22 and .82 on the same piece of coax. (Very high Q tuned circuits - see pic at left.)

SWIARC Meeting Minutes 03/2023

Club Pres Derek TYG had the Zoom app going, and after the pledge to the flag these people introduced themselves.

Derek	W0TYG	Norm	WA0JYD
Keith	KE0AEP	Joel	WB0OJO
Don	W0AF*	John	KB0QKH
Bruce	NOBHB	Dan	KB0TDW
Bill	KD0FJR	Rod	WB0UAA
Chris	KE0FBL	Dennis	WA0VJL
Greg	N0GR	Craig	KD0YTI
Mark	KF0GVT	Rich	WA0ZQG
Paul	WB0GXD	(18)	
Jim	W0JRN	* via Zoom	

The program was on ARES, Skywarn, and all the other ways we participate in weather events. Club EmComm chair Rick RLR couldn't make it, but Nebr state coordinator Jim W0JRN filled in.

Treasurer's Report

Greg N0GR reported a balance of \$8,557, a big increase due to the **\$922 profit** from our March **Hamfest**. Plus, \$60 more for renewals. (You're no longer an official member if you haven't paid the twenty bucks by March 31st. We still like you though.)

Repeater

Chris FBL said they've built various parts into a rack mount (no cans) so that when we get a site they'll be able to install .82 quickly. (The cans are stuck at the hard to access Simms St site.)

Late News: QKH knows somebody from the new company managing the Simms site, but later news is we are off the site. Left it 30 March.

Meanwhile, Chris FBL can't get in touch with the County regarding permission to put .82 at our 'new' site at Memorial Park on Gleason Ave. We have permission to put .225 there (it already is) but a VHF repeater requires another site survey.

March Hamfest

Normally around a hundred in attendance, this year 116 people signed in and the estimated total attendance was 140. The hall cost \$250 and net profit was \$922.

Hamfest (cont.)

Joel KE0QGD set up a 'free' kitchen with OJ, coffee, and donuts, collecting free will donations of over a hundred bucks for us. Donuts, food, and drink were donated by several people.

New Business

We've vacillated on whether or not club liability insurance is a 'normal' (\$200) expense to be paid regularly. Motion passed to pay it. The Zoom app costs. Paul GXD motioned to pay up to \$150 for it. (Expected to be \$150 less discount to \$105.) Passed. ZQG motioned to pay the club liability insurance every year subject to the club treasurer's personal judgment. Passed.

Meeting adjourned at 8:28 PM.

Minutes by Club Sec'y, Rich WA0ZQG

Program Review

Jim W0JRN went on for 45 minutes about ARES and how FEMA affects it, also training available for devoted disciples. Info at NeARES dot net.

We watched a 6 minute video with a guy named Walter KB2GSD. Last name Cronkite.



This is 1 of 2 Vertex VXR 7000 repeaters we own on Channel 1 memory (set to 82/22)