

Allen County HamNews

Fort Wayne Radio Club Fort Wayne DX Association

Allen County Amateur Radio Technical Society

January 2021

Volume 22

Issue 1

Happy New Year of 2021!



• From the Fort Wayne Radio Club, the Allen County Amateur Radio Technical Society, and the Fort Wayne DX Association

In this edition:

ARES Update

Page 2

From the Editor

Page 2

160m City Lot Antenna

Page 3

Carole's Corner

Page 6

INQP Plaque

Page 7

ACARTS President's Column

Page 8

3 Small Projects

Page 9

January SKCC Update

Page 10

For Sale

Pages 12-13

Contest Calendar

Page 14

2021 Major Contests

Page 15

Glacial Esker 40 Cancelled

All,

Please note this cancelation from the Ignite Trail Series:

“RACE ANNOUNCEMENT

We’ve made the decision to not move forward with the 2021 Glacial Esker 40 (GE40). As a non-profit, we often have to make difficult business decisions and this certainly qualifies as one. Please note that this in no way impacts the 2021 Indiana Trail 100, as that event will proceed as scheduled.

New 2022 IT100 RD, Nick Brandt, has advised that he’ll review the status of the GE 40 next year and decide whether or not he’ll proceed with a 2022 race. Up for consideration will potentially include shifting the GE40 race date to another time of year or changing the format, if it moves forward at all.

We thank all our past participants and volunteers for being part of this event over the last few years. Stay tuned for future announcements.”

Thanks to those of you that have participated in support of the race in the past.

Stay Safe and Well,

Jim Moehring, KB9WWM

District Emergency Coordinator



From the Editor: End of Year One!

2020 is about to go up in smoke, especially as the ball is about to drop in about 45 minutes.

While 2020 is not a year that most of us would care to repeat, January 2021 marks a new calendar year (or volume) for the Allen County HamNews. My sincere thanks to everyone who shares information to make this publication possible! I’d like to include a new column or two—if you have a fun idea that you’d like to turn into a column, please let me know!

As a reminder, please be sure to send any content to me that you would like to include in the February edition of the HamNews by no later than Saturday, January 30th.

All the best wishes for a great year of 2021!

Josh Long, W9HT

drjoshlong (at) gmail.com

P.S. The FCC made a few changes that impact the amateur radio service. Please check out the following article on the ARRL site for more information:

<http://www.arrl.org/news/fcc-reduces-proposed-amateur-radio-application-fee-to-35>

Tuning Up

K2AV over FCP: A City Lot Antenna for 160m

Jim AC9EZ

Happy New Year to you all! It's hard to believe we're already starting a new year, but 2021 has arrived. I hope this year gives you many great experiences and joys.

To begin the new year, I thought it would be interesting to dive into a unique antenna for 160 meters that is specifically designed for small lots - the K2AV inverted L over a folded counterpoise (FCP). Thanks goes to my friend Carl, K9LA, for recommending this particular antenna to me. Thanks Carl!

A Little Antenna History:

160m, otherwise known as Topband, is a challenge when it comes to putting up an effective antenna. A typical 1/2 wave dipole for 160 would take up over 246 feet (if run in a straight line). To work DX reliably, that same 1/2 wave dipole would have to be over 200 feet in the air!

To answer the height and size problems for antennas on 160m, radio amateurs since the very early days of amateur radio have been using the Inverted L antenna. Simply put, the inverted L antenna is a 1/4 wavelength vertical with its topmost portion bent over at some angle (the horizontal portion of the "L"). Because of that horizontal portion, the antenna's overall length is extended from 1/4 wavelength to 3/16 wavelength, giving the inverted L an overall length of ~130 feet, plus or minus a few feet.

The inverted L behaves very similarly to a 1/4 wave vertical. Just like a vertical, the inverted L requires a good

ground plane or radials to work well. Feedpoint impedance of an inverted L is close enough to 50 Ohms to be fed directly by coax cable. The vertical portion of the L gives the antenna a good, low radiation angle on both transmit and receive - great for dx! Lastly, because the inverted L has both vertical and horizontal wires as the main radiator, the antenna has both vertically and horizontally polarized radiation. The vertically polarized radiation gives the antenna its dx capabilities and the horizontally polarized radiation is useful for NVIS or regional communication.

Unfortunately, the inverted L does have one Achilles' heel - the length of its radials. Gold standard for radial length is a 1/4 wavelength long on the frequency of operation, with the number of radials ranging from about 66-120. That's a lot of wire, and requires a large budget (for the wire) and back-breaking work (to bury all the radials). So what's to do? Enter the K2AV over FCP.

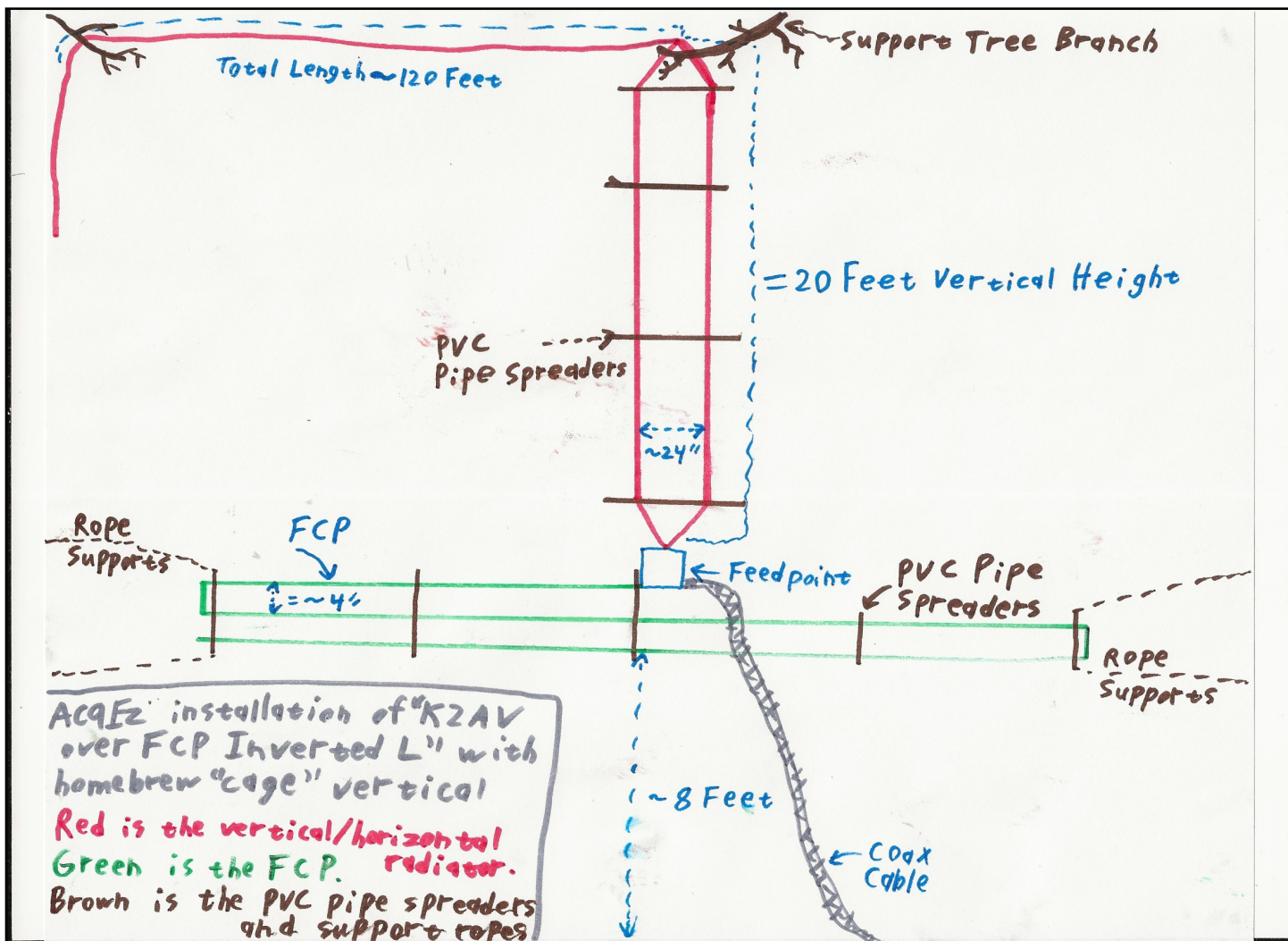


Figure 1: AC9EZ's installation of the K2AV over FCP inverted L antenna

K2AV over FCP: *the Design*

So what exactly is the K2AV over FCP inverted L? Simply put, it's an inverted L that has its feed point elevated above ground (8-10 feet or higher), and that uses a folded counterpoise (FCP) instead of radials. That's all there is to it! No fancy matching networks, no loading coils, just a simple inverted L lifted into the air and placed over a 66 foot long counterpoise.

The FCP is what makes this antenna so special. The entire antenna was designed for space-constrained hams (like me!) who couldn't put a bunch of long radials in their yard, for one reason or another. The FCP is one long wire, about 157 feet in length, that doubles back on itself a couple of times to fit the 66 foot space/length.

Elevating the K2AV inverted L increases the inverted L's efficiency by decreasing ground loss. The FCP and radiating element of the inverted L connect to standard coax cable through an isolation transformer (NOT a 1:1 current balun). K2AV specifically warns

Jim Brown, K9YC, a rather famous amateur due to his work on rf chokes, explained that the reason an isolation transformer is so necessary in K2AV's design is twofold: Firstly, the isolation transformer performs the usual 1:1 current balun function, keeping stray rf off the shield of the coax. Secondly, the isolation transformer has "leakage inductance" that resonates the FCP in the 160m band. K9YC goes on to explain in a document entitled "Working 160m from a Small Lot (and Larger Ones Too)" that the same general principle of the isolation transformer can be accomplished through the use of a 160m rf choke and a separate inductor. The inductor will provide enough inductance to resonate the FCP in the 160m band, and the rf choke will prevent common mode current from developing on the coax shield.

K2AV Installation at the AC9EZ station

My friend Carl, K9LA, recommended that I consider installing a K2AV over FCP for 160m, as I wanted to improve my station's contest ability on Top-

higher the efficiency of an antenna, generally, the lower the bandwidth. 160m is notorious for antenna builders because of the challenge faced when trying to use one antenna for the entire 160m band without resorting to an external antenna tuner.

While thinking about the bandwidth issue, I ran across a discussion in my ARRL Antenna Handbook (2015 edition). The handbook talks about how an efficient, inverted L antenna will have a 2:1 swr bandwidth ~50 Khz. However, the handbook went on to say that the 2:1 bandwidth can be increased if two parallel, vertical conductors are used instead of a single vertical wire. Jim Brown experimented with just such a concept and achieved a 1.5:1 swr of 100 Khz by using two, #10 wires spaced 10 inches apart.

I decided to mix and match the K2AV FCP inverted L with Jim Brown's "cage dipole" vertical element. K2AV has some great instructions on his website on how to build the entire K2AV FCP antenna and I tried to follow these directions as closely as budget allowed. I used what wire was on hand, and my T300a-2 core is wound with #14 THHN wire that I got from Menards. Two vertical wires for the vertical radiator are soldered together at the feedpoint and at the conjunction with the horizontal leg of the "L". The entire antenna takes up most of my backyard, but it's worth it to have one good antenna for 160m. With my rig's built-in tuner, I can operate from 1.800 Mhz. to ~1.930 Mhz. If I adjusted the length of the antenna, I could probably tune from 1.800 Mhz. to possibly 1.960 Mhz. Most likely, the loss present in my current antenna set up plus the "cage" style vertical radiator combine to give the wide bandwidth.

Results?

With the new K2AV over FCP, I have operated in two separate 160m contests and checked in to the local No Name Net. Reports locally have been quite good, with noticeable improvement on my local signal. During the ARRL 160m contest, I worked 320 stations, including Alberta, Saskatchewan, Mexico, the Cayman Islands,



Figure 2: Feedpoint of my K2AV over FCP inverted L.

builders to not use a regular 1:1 current balun, as the antenna will not function to its full potential unless an isolation transformer is used.

band. After some research, I decided that this antenna was a really good option, particularly considering the limitations of budget and property. However, I had one concern: bandwidth. The



Figure 3: PVC spreader and support rope

and the Bahamas. In the Stew Perry Topband Challenge, I made 104 qsos, including one contact to the US Virgin Islands. Stateside qsos include a good contact on FT8 with North Dakota, and a report of being heard as far as Scotland on FT8.



Figure 4: Interior of homebrew insulation transformer

Keep in mind that this antenna will never beat a tall, 160m vertical with a good ground plane. However, this antenna will let me get on 160m and enjoy contesting and some dx'ing from this suburban lot.

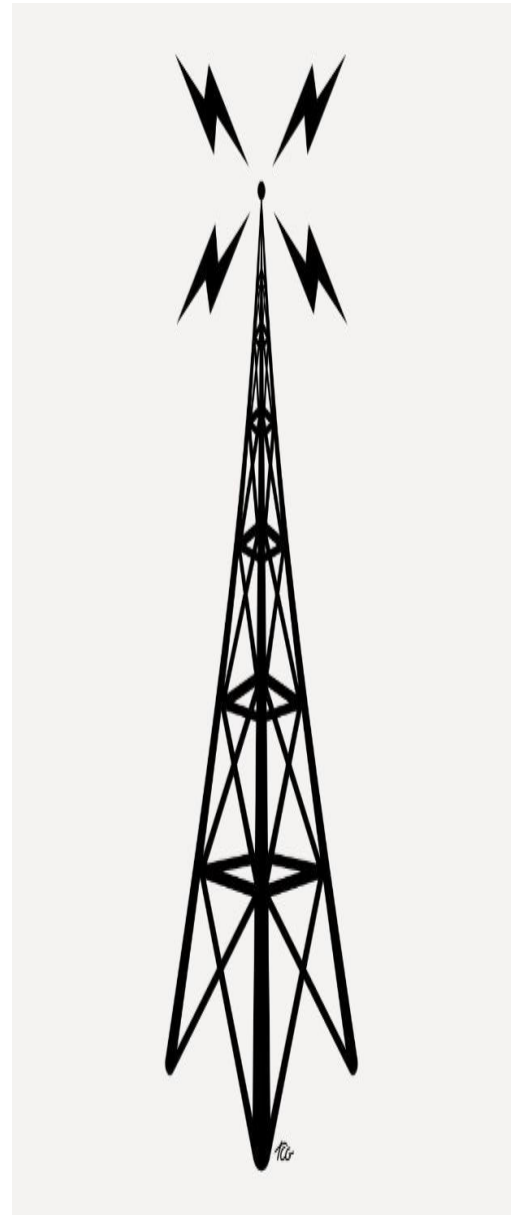
If you are interested in building the K2AV over FCP, please follow the instruction on K2AV's website. <https://www.k2av.com/>. You may also enjoy reading a more technical discussion by W8JI on the FCP: https://www.w8ji.com/fcp_folded_counterpoise_system.htm.

Finally, Jim Brown, K9YC, has a really good document on getting on 160m. You can read all about his various sug-

gestions to get on Topband at this link. <http://audiosystemsgroup.com/160MPacificon.pdf>.

73, Happy New Year, and see you on the bands!

Jim AC9EZ



Hamsplatter

Fort Wayne Radio Club P.O. Box 15127, Fort Wayne, IN

Carole's Corner For January 2021



Maybe come February things will change. I hope so, I miss seeing everyone, attending our monthly luncheons, and just seeing people.

Repeaters seem to be working normally and I do hear people talking. Keep it up; stay warm, safe and healthy. Looking forward to seeing you all again soon!

73's and 88's,

Carole, WB9RUS



A snowy goodbye to the end of December and this "wonderful" year. In some ways it has been a very good year, for our family. We had a grandson get married, a granddaughter get engaged and found out we are expecting a great-granddaughter in March.

In addition I think our club members have stayed reasonably healthy and happy, and I'm glad to report that our CY 2021 club membership headcount as of 30 December stands at one hundred and seven, with a few more trickling in.

Since things are on lock-down for now, no January meeting.

FWRC Officers 2021

President

Carole Burke, WB9RUS
(260) 637-1989
Wb9rus(at)comcast.net

Vice President

Paul Prestia, KA3OPZ
(260) 485-9632
Phixer(at)gmail.com

Secretary

Al Burke, WB9SSE
(260) 637-1989
Aburke55(at)comcast.net

Treasurer

Bob Streeter, W8ST

Communications Manager

Charles Ward, KC9MUT
(260) 749-4824
Kc9mut(at)yahoo.com

Directors

Steve Nardin, W9SAN
(260) 482-4039
W9san(at)arrl.net

Clarke Derbyshire, KG9FM
(260) 485-6255
Cderbyshire(at)comcast.net

Bill Hopkins, K9WEH

Stuart Hall, KD9LFW

Newsletter Editor

Josh Long, W9HT

2020 INDIANA QSO PARTY PLAQUE

The Hoosier DX and Contest Club has sent the TOP INDIANA CLUB award to the Fort Wayne Radio Club for its record-breaking performance in this year's Indiana QSO Party.

We had an Indiana record for club aggregate scores, easily beating out the old record: over 700,000 points! (see scores below!)

For 2021, how about we go for another record? I am thinking we could top ONE MILLION points! Who is up for it?

Again, thanks to all that participated in making this happen!

73,

Steve W9SAN



CLUB COMPETITION

Fort Wayne Radio Club (28 logs)

KD9KMK KB9OZI KB9OS KD9ITZ K9BLI W9SAN K9EA WA9BBN
K9LI KA9GKE AC9EZ KD9INP W9WN KR9U KD9GDY W9HT **737223**
W9GT K9FMX N9HRA KU8T W9LW K9FW N8KR KJ9R N9RIS
W9SA KD9HAV K3HZZ

Lafayette DX Association (11 logs)

K9ELF K9WX N9FN KF9UP K9WX N9FN K9FN N9LJX N9LF **360546**
KF9UP N9LJX K9SE WB9QIU N9LF K9FN N9KT W9TN

NorthWest Indiana DX Club (5 logs)

W9DZ W3ML AJ9C K9KJ N9RD **224907**

State of the Arts

Allen County Amateur Radio Technical Society

P.O. Box 10342, Fort Wayne, IN

ACARTS President's Message for January 2021

A new year is upon us and let us hope that it will not be an entirely "lost year" as was 2020. With the COVID-19 pandemic still raging, ACARTS has no immediate plans for any meetings or functions that can be safely held. With the vaccines starting to be distributed, there is hope that we can again hold meetings and functions by the end of the year.

Thanks to all of you that have renewed your ACARTS membership or joined the club for 2021. Without the Hamfest or meetings being held this past year, all renewals and new memberships had to be done by mail. Many, many, of you have responded, and again, thank you for your support of ACARTS. ACARTS memberships run the calendar year, or January 1st to December 31st. If you are among the few that have not renewed, now would be the time to do so. We will have meetings again and membership ensures that you will get e-mail reminders of club events.

One thing that will be held is the FM VHF/UHF Simplex Contest. Last year's contest drew a record number of participants and entries. It is one activity that can be held pandemic or not. Mark your calendars for this year's event to be held on Saturday evening, April 10th. More details

will be forthcoming as the date approaches.

In the meantime, remember that we are hams. The HF bands are starting to have more and more openings and activity is picking up. Make use of your radios to stay busy and keep in contact with your friends via the repeaters.

73,

Dave Lindquist, W9LKH



ACARTS Officers 2021

President

Dave Lindquist W9LKH
260-485-6135
w9lkh(at)comcast.net

Vice President

Jim Boyer KB9IH
260-489-6700
kb9ih(at)arrl.net

Secretary

Chris McCullough W9TSB
260-312-2750
kd9lrw(at)gmail.com

Treasurer

Howard Pletcher N9ADS
260-747-5252
n9ads(at)arrl.net

Station Manager

Jim Sampiere KD9NPL
260-999-8132
Kd9npl(at)gmail.com

Fundraising Manager

Fred Gnegnagel KC9EZP
260-704-7801
kc9ezp(at)gmail.com

Directors at Large

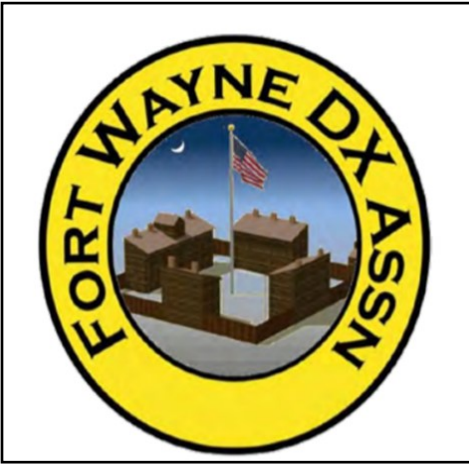
Bob Erb N9PWM
260-466-7772
roberterb(at)hotmail.com

Steve Shannon K9SKS
260-704-5353
k9sks(at)aol.com

(1 open position)

W9INX Trustee

Dave Lindquist W9LKH
260-485-6135
w9lkh(at)comcast.net



3 Small Projects

Carl Luetzelschwab, K9LA

T/R Switch for Vintage Equipment

In 2013 I constructed a simple T/R switch to use with my vintage equipment. It used a 6C4 tube, and the transmit RF biased the tube into cut-off so that a very low level of RF went to the receiver. You can read more about this T/R switch in the FWDXA column in the December 2013 Allen County HamNews (which is available at http://acarts.com/newsletter_archive.htm).

With the transmitter and antenna connected together, the transmitter output network affected the sensitivity in receive. I discovered that there was a good amount of loss on the higher bands (15m and especially 10m). Thus I reverted back to a manual T/R switch.

Earlier this year I bought a Pacific Antennas 'Easy TR Switch Kit' that handles up to 125 W. It uses a small 12V relay to go between receive and transmit. For a 12V source, I'm thinking of using a battery to keep the switch as a stand-alone accessory. The relay only uses 12.5 mA, so a small 12V battery with a 500 mA-hour rating would allow many hours of operating time since the relay is only energized in transmit.

I'm also looking at the simple T/R switch in the August 1960 issue of Popular Electronics. It uses a 117 Volt, 6 Watt incandescent bulb along with back-to-back 1N34 diodes. Very simple!

75 ohm to 50 ohm transformer

The January 2021 issue of QST had an article about a 75 ohm to 50 ohm transformer. The author bought a 200 foot length of coax (the outer diameter was similar to RG-8) at a very reasonable price at a hamfest, but found out it was 75 ohms when he got home. He designed an auto-transformer wound on a ferrite core with a turns ratio of 5:4. The impedance ratio (1.56:1) is the square of the turns ratio; thus 75 ohms is transformer down to 48 ohms. The measured loss of back-to-back transformers (to emulate a transformer on each end of the coax) was 0.31 dB on 40m.

I wondered how much loss there would be without the transformers. If a 40m inverted-vee is $50 + j0$ in the middle of the band, the SWR at the end of a 100 foot length of RG-11 (75 ohm Belden 8213) would be 1.5:1. The loss in 100 feet of Belden 8213 at 7 MHz when matched is 0.35 dB, and the additional loss in the coax due to a 1.5:1 SWR would be around 0.05 dB. The mismatch loss at the transmitter due to the 1.5:1 SWR would be another 0.2 dB. Without the transformers, the total loss would be 0.6 dB.

Is the 0.3 dB less loss with the transformers worth the effort? On the surface, probably not – but there are extenuating circumstances. The antenna may be $50 + j0$ at 7.150 MHz, but its SWR could be up to 2:1 at the

band edges. Thus we may be getting close to the limit for reducing output power in solid state transmitters. Of course an internal tuner in the rig would mitigate this issue. In a vintage transmitter, this is not a problem with a pi-network output that can be tuned.

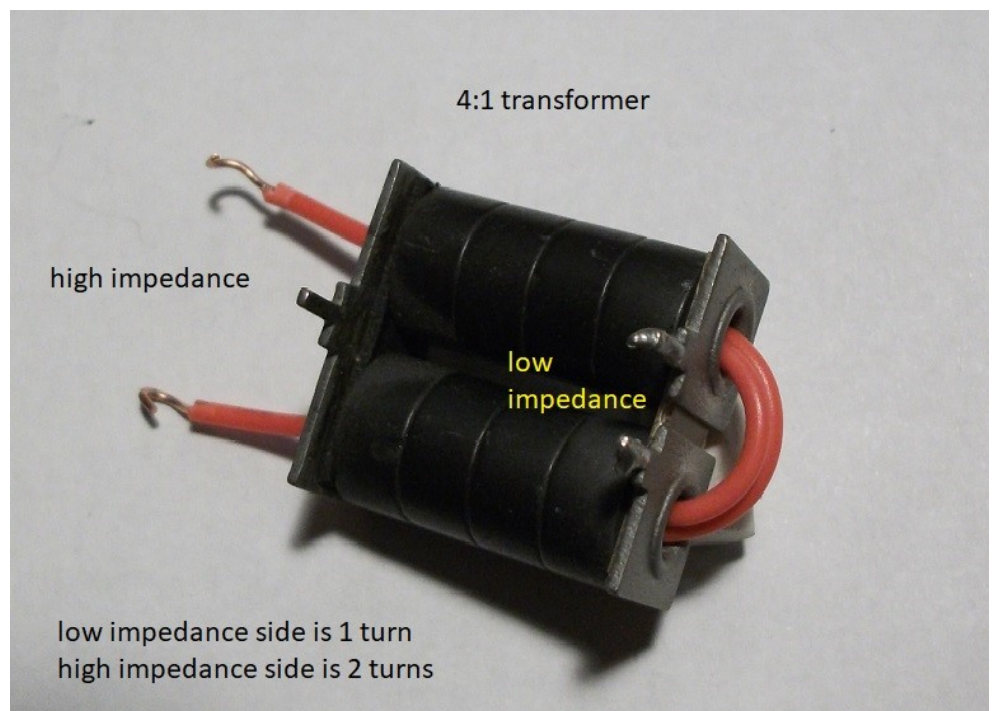
4:1 transformer for 6m

In the April 2020 FWDXA column in the Allen County HamNews, I looked at a long wire for 6m that was 2 wavelengths long. The impedance, when fed a quarter-wavelength from the end, is $125 + j0$ ohms. One way to match 125 ohms to 50 ohms would be to use a quarter-wave length of 75 ohm coax – it would transform the 125 ohms to 45 ohms.

Another solution would be to use a 4:1 transformer. It would result in a 1.6:1 SWR for my OMNI 7 (which has an internal tuner). From my Motorola days in Schaumburg, I have a 4:1 transformer that I used in the output of a 110 W Low Band (29.7-50 MHz) Mitrek power amplifier design. See the accompanying photo of it – it is quite small and should handle 100 W on 6m.

Summary

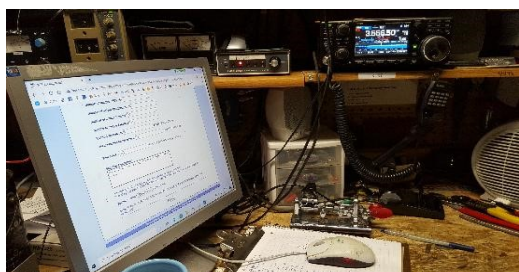
It looks I have several interesting to-do's this winter!



FWRC SKCC members provide 3106 bonus qso's in the December Sprintathon

The dust has settled and the 15 Fort Wayne SKCC stations who acted as Santa and his reindeer were successful in providing the sought after bonus points for the hundreds of ham operators world-wide participating in the weekend event in December. Santa was multi operated by 10 different club members utilizing our club call, W9TE. Those 10 ops made over 400 contacts with Dan – N8EA leading the charge with 101 contacts! Other Santa/W9TE ops included W9WN, W9GOO, K9LA, W9GT, KU8T, N8KR, AC9EZ, KD9GDY, and K9FW. Many of them did double duty as both Santa and reindeer. Each of Santa's reindeer counted as bonus points.

Rudolph, Jack-W9GT, led the reindeer charge with his shiny red nose and his ever big signal. Cranking out 325 contacts as the lead reindeer, Jack also went in disguise as "Santa" and made an additional 43 qso's as W9TE! While Jack's station has undergone some major antenna changes, Jack still makes his presence known on the bands!



Blitzen, Tom – KU8T, was dominate throughout the WES. His 361 contacts as a reindeer was in the top 10 of the more than 350 submitted logs. His easy to copy fist on his straight key and Icom 7300 was obvious to all who worked him. Tom also, like Jack, did double duty as W9TE-Santa making an additional 33 contacts. WOW- 394 contacts! Well done Tom!

Dancer, Joe-WB9EAO overcame HOA restrictions and erected some stealth antennas and turned in a whopping 240 contacts! Joe has mastered the art of throwing end-fed antennas over TALL trees! Joe is also a master in sending with his special *bug* and loves his Yaesu FTdx3000 when not playing with his old Drake station. It looks like the "real" Dancer visited Joe in his shack!



Cupid, Jim-KD9GDY, did a stellar job in handling the pile-ups that come when you're a bonus station and have a big signal. His 14 contacts as Santa complimented his 235 contacts as Cupid. Jim has a variety of antennas, loves his Icom-7300, and is mastering his skill as a bug user . . . and Jim is a "lefty" so has a hard-to-find left handed Vibroplex bug next to his straight key.

Comet, Al-K9FW, did double duty as both Santa and a reindeer. Turning in more than 200 contacts is a testament to his operating prowess. We know that AL is a force to be reckoned with every SKCC event as he's always one of the top scorers. Al has a nice antenna farm and a variety of rigs to choose from. I think he probably used his preferred Kenwood TS-590SG as seen in the picture.



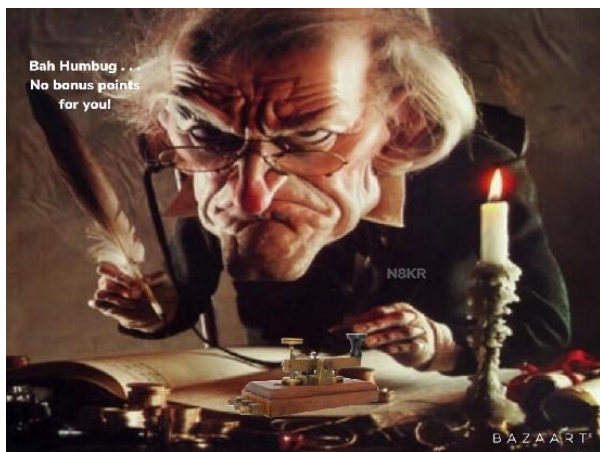
Dasher, Ed-WA9BBN, was a dominate force during the weekend working a WES high of 235 contacts. His low to the ground endfed attracted signals as far away as France and Alaska! Way to go, Ed! Ed has a good ear in pulling out weak signals with his Icom 7300. His fist is so smooth, you don't know if he's using a bug or straight key!

Prancer, Jim-AC9EZ, literally pranced around the bands making lots of contacts! Jim did double duty as both Santa and Reindeer with 215 combined contacts. Jim is enjoying his newly acquired E.F. Johnson straight key with his Yaesu FT-450D. Jim has a bunch of antennas and always a good signal. A special qsl card was created by Jim for anyone who worked him as Dancer. Cool!



Thundering *Donder*, Bill-W9SA, made his presence known during the event with over 150 contacts. Bill has a great station running Elecraft equipment. His K3 was busy as he switched between his bug and straight key. To help Bill get into the role of Donder, he grew a wonderful set of festive Christmas antlers! What a good, fun time this WES was!

Vixen, Josh-W9HT had a busy weekend with a variety of activities including getting packed for his early Monday morning trip to Florida! Josh cranked out over 125 contacts as a reindeer and operated at both his shack and N8KR's shack. Josh also is handling all of the requests for the special FWRC Santa certificate offered to those participating in the WES. Josh enjoys his Kenwood TS-590SG, wire antennas, and vintage Lionel J-36 bug.



Scrooge, Ken-N8KR, spent the WES in his shorts and T-shirt operating from his temporary Florida qth. Ken made 331 contacts as Scrooge and 22 as Santa. His Kenwood TS-590SG and Vizkey bug fed his 40-20 dipole up 28 feet. Ken worked all states but Alaska and North Dakota and worked several European stations. You'll find Ken active in all SKCC events along with all of the members mentioned above.

Congratulations to several club members who did not participate as bonus operators but chose to look for us and work us. They include Jay – W9LW, Bruce – N9DGL, Steve – W9SAN, Dave – N9FGP, Bob – KC9UR, and Terry – K9FMX. That is a LOT of CW activity! Happy New Year from Ken—N8KR!



For sale and wanted listings in this section are provided to members of the Fort Wayne Radio Club, the Allen County Amateur Radio Technical Society, the Fort Wayne DX Association, and to other local hams free of charge! Listings can be renewed upon request to the editor (see pg. 2 for contact information).

I am looking to either purchase or pick up an older, non-working, hf amplifier (a “tech” special). An older Ameritron or Heathkit amp is preferred, but an old sweep-tube amp is also welcome, either as a “throw-away” item or at minimal price. If anyone has a possible project amp, please email me at dfile13 (at) hotmail.com, or call me at 260-485-7770. You may leave a phone message. Thanks and 73,

Jim AC9EZ

- Max-Gain Systems MK-8 HD telescoping antenna mast with heavy duty guy ring kit. \$120
- W9IIX gin pole. Needs new rope. \$75

For any of these items, please contact Terry K9FMX at tjbowman (at) frontier.com or at 260-705-7128.










- Yaesu ATAS-100 Active Tuning Antenna System. Good cosmetic condition, unknown operating condition. \$100 or best offer.
- Radio Shack HTX-202 2m handheld radio. \$50 or a lower price for a new ham who needs an affordable radio.
- Single paddle Kent key. Good cosmetic condition. \$75.

Contact Josh W9HT for more information. See page 2 for email address.

Please see the following page for an additional listing from the Fort Wayne Radio Club!

Your item could be listed here next month! Just send the editor an email with your listings before January 30th! See page 2 for contact information.

The Fort Wayne Radio Club has the following items available for sale. Please contact Steve W9SAN if you are interested in any of these items at w9san (at) arrl.net.

	<p>SB-401 NOT TESTED; CLEAN CONDITION; INTERNAL POWER SUPPLY; WITH MANUAL: \$50 OBO</p>		<p>HEATH MT-1 TRANSMITTER POOR CONDITION; GOOD PARTS RADIO. \$20 OBO.</p>
	<p>SB-303 LIGHTS BUT NO AUDIO; CLEAN CONDITION; WITH MANUAL. \$50 OBO</p>		<p>DRAKE T-4XC; R-4C; MS-4; CONDITION UNKNOWN; MAKE OFFER!</p>
	<p>SP-630 CLOCK WORKED BUT FUSE BLEW; NO MANUAL. \$25 OBO</p>		
	<p>SWAN 240 NOT TESTED; HAS MANUAL; NO MIC, KEY, NO POWER SUPPLY: \$25 OBO</p>		
 	<p>HEATHKIT HW-101 AND HP-23; TESTED; WORKS GREAT; WITH CW FILTER; NO MIC, KEY, OR SPEAKER. COMES WITH DUST COVER; REALLY NICE.; MANUALS; \$100 FIRM</p>	<p style="text-align: center; font-size: 2em;">Also available Cushcraft R5 vertical \$20</p>	
	<p>HEATHKIT JUNIOR. POOR CONDITION. FREE TO A GOOD HOME!</p>		

Selected Contest Calendar for January 2021	
ARRL Kids Day	1800Z-2359Z, Jan 2
ARRL RTTY Roundup	1800Z, Jan 2 to 2400Z, Jan 3
EUCW 160m Contest	2000Z-2300Z, Jan 2 and 0400Z-0700Z, Jan 3
SKCC Sprint Europe	2000Z-2200Z, Jan 7
NCCC RTTY Sprint	0145Z-0215Z, Jan 8
QRP Fox Hunt	0200Z-0330Z, Jan 8
NCCC Sprint Ladder	0230Z-0300Z, Jan 8
YB DX Contest	0000Z-2359Z, Jan 9
Old New Year Contest	0500Z-0900Z, Jan 9
SKCC Weekend Sprintathon	1200Z, Jan 9 to 2400Z, Jan 10
UBA PSK63 Prefix Contest	1200Z, Jan 9 to 1200Z, Jan 10
North American QSO Party, CW	1800Z, Jan 9 to 0559Z, Jan 10
NRAU-Baltic Contest, SSB	0630Z-0830Z, Jan 10
NRAU-Baltic Contest, CW	0900Z-1100Z, Jan 10
DARC 10-Meter Contest	0900Z-1059Z, Jan 10
Midwinter Contest	1000Z-1400Z, Jan 10
RSGB AFS Contest, Data	1300Z-1700Z, Jan 10
Hungarian DX Contest	1200Z, Jan 16 to 1159Z, Jan 17
PRO Digi Contest	1200Z, Jan 16 to 1159Z, Jan 17
RSGB AFS Contest, SSB	1300Z-1700Z, Jan 16
NA Collegiate Championship, SSB	1800Z, Jan 16 to 0559Z, Jan 17
North American QSO Party, SSB	1800Z, Jan 16 to 0559Z, Jan 17
WAB 1.8 MHz Phone/CW	1900Z-2300Z, Jan 16
ARRL January VHF Contest	1900Z, Jan 16 to 0359Z, Jan 18
Feld Hell Sprint	2000Z, Jan 16 to 0559Z, Jan 17
Run for the Bacon QRP Contest	2300Z, Jan 17 to 0100Z, Jan 18
BARTG RTTY Sprint	1200Z, Jan 23 to 1200Z, Jan 24
UK/EI DX Contest, CW	1200Z, Jan 23 to 1200Z, Jan 24
SKCC Sprint	0000Z-0200Z, Jan 27
QRP Fox Hunt	0200Z-0330Z, Jan 29
NCCC Sprint Ladder	0230Z-0300Z, Jan 29
CQ 160-Meter Contest, CW	2200Z, Jan 29 to 2200Z, Jan 31
REF Contest, CW	0600Z, Jan 30 to 1800Z, Jan 31
Winter Field Day	1900Z, Jan 30 to 1900Z, Jan 31
<i>This information comes from the WA7BNM Contest Calendar at contestcalendar.com and is gratefully acknowledged. It is deemed accurate as of the time of publication.</i>	


 The logo for RadioSport is a vertical banner on the right side of the page. It features a dark blue background with a yellow and orange curved shape at the top and bottom. The word "RadioSport" is written vertically in a large, white, sans-serif font.

RadioSport

PERIODIC TABLE OF MAJOR AMATEUR RADIO CONTESTS

2021

1 → Start Day (UTC) → 3 → End Day (UTC)
 0000Z → Start Time (UTC) → 2359Z → End Time (UTC)

Multimode
 off-the-air
 CW
 SSB
 Digital
 VHF/UHF

Contest Name → Major Contest of weekend

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2	1800Z ARRL RTTY Roundup	3 2400Z NA Sprint CW	7 0400Z ARRL DX SSB	3 1500Z SP Polish DX	1 varies 7QP/IN/DE New England QSO Parties	5 1200Z SEANET Contest	3 1400Z Marconi Memorial HF	4 1800Z NAQP CW	4 0000Z CWOps CW Open	2 1600Z California QSO Party	3 0300Z ARRL SS CW	5 1600Z ARRL 160 CW
9	1800Z NAQP CW	10 0600Z WPX RTTY	14 2400Z NA Sprint RTTY	10 0700Z JIDX CW	8 1200Z CQ-M DX	12 1800Z ARRL June VHF	10 1200Z IARU HF	14 0000Z WAE CW	11 0000Z WAE SSB	9 0800Z Oceania CW	13 0000Z WAE RTTY	12 2359Z ARRL 10
16	1800Z NAQP SSB	17 0600Z ARRL DX CW	20 1200Z Russian DX	17 0900Z CQMM DX	15 1200Z King of Spain	19 0000Z All Asian CW	17 1800Z CQ VHF	21 1800Z NAQP SSB	18 1600Z WA/NJ/NH QSO Parties	16 1500Z Worked All Germany	20 2100Z ARRL SS SSB	18 2359Z RAC Winter
16	1900Z ARRL January VHF	18 2200Z CQ 160 SSB	27 0000Z WPX SSB	24 1600Z Florida QSO Party	20 1100Z Contest University Dayton Hamvention	26 1800Z ARRL Field Day	24 1200Z RSGB IOTA	28 1200Z WW Digi	25 0000Z CQWW RTTY	23 2400Z CQWW RTTY	27 0000Z CQWW CW	25 HAPPY HOLIDAYS
29	2200Z CQ 160 CW	31 2159Z CQ 160 CW	31 2159Z CQ 160 CW	29 0000Z WPX CW	29 0000Z WPX CW	30 0000Z CQWW SSB	31 2400Z CQWW SSB	30 0000Z CQWW SSB	31 2400Z CQWW SSB	30 0000Z CQWW SSB	31 2400Z CQWW SSB	31 2400Z CQWW SSB

Area Nets					
Daily			Tuesday		
8:00 AM	3.535	Daily (QIN) Indiana Section CW net	7:30 PM	147.150+	21 Repeater Group Net (97.4 PL)
8:30 AM	3.940	Daily Indiana Traffic Net	8:00 PM	50.580 USB	FWRC 6-Meter SSB Net
6:00 PM	3.940	Daily Indiana Traffic Net	9:00 PM	146.940-	Allen Co. ARES Training Net (141.3 PL)
6:30 PM	146.880-	IMO (alternate is 146.760)	Wednesday		
7:00 PM	147.015+	Tri State Two Meter Net	7:00 PM	146.760-	FWRC YL Net
8:00 PM	3.535	Daily (QIN) Indiana Section CW net	8:00 PM	145.270-	Whitley Co. ARES (141.3 PL)
Week-days			8:00 PM	50.580 FM	FWRC 6-Meter FM Net
9:00 AM	3.820	Little Red Barn Net	9:00 PM	146.940-	Help and Swap Net (141.3 PL)
Sunday			Thursday		
8:00 PM	444.550+	Whitley Co. ARC Sunday Night Net (141.3 PL)	8:00 PM	D-STAR	Indiana D-STAR net (Note 3)
8:30 PM	1.965 & 146.910-	"No-Name" Net also on EchoLink Node number 519521	8:00 PM	50.580	AM 6-Meter AM Net
9:00 PM	145.53 simplex	Northeast Indiana Packet Net 1200 baud (Note 2)	8:30 PM	145.510 simplex	Allen County ARES Digital Operations Team Training Net (Note 4)
Monday			Saturday		
8:00 PM	224.780-	Fort Wayne 224 Net	8:00 PM	146.685-	Huntington ARES(141.3 PL)

1. All times local time. Any changes or corrections should be submitted to the newsletter editor at drjoshlong (at) gmail.com.
2. NEIPN is direct accessible via any BPQ Chat Node (or through Node hopping etc.) via other packet frequencies in this area and other areas through other nodes (it is locally direct accessible on 145.53 in NC & NE Indiana/NW Ohio and SE Michigan using KA9LCF-11, KC9VYU-11, N9LCF-11, N9PXO-11, K9BIF-11) Most BPQ Nodes use an SSID of -11.
3. Reflector REF024B.
4. Net starts using BPSK-31 and switches to BPSK-250 after roll call to pass traffic etc. NBEMS suite of software (FLDIGI, FLMSG, and FLAMP) is preferred.
5. Indiana HF Traffic Nets Web Site: <http://www.inarrl.org/index.php/public-service/indiana-nts>

Fort Wayne repeaters							
Frequency	Offset	Tone	Callsign	Frequency	Offset	Tone	Callsign
145.330	-0.6 MHz	--	W9FEZ	443.100	+5 MHz	141.3	K9MMQ
146.880	-0.6 MHz	--	W9INX	443.275	+5 MHz	141.3	K9MMQ
147.255	+0.6 MHz	--	W9INX	442.6375	+5 MHz	--	N9MTF
146.760	-0.6 MHz	--	W9TE	444.800	+5 MHz	--	W9FEZ
146.910	-0.6 MHz	--	W9TE	443.800	+5 MHz	--	W9INX
146.940	-0.6 MHz	141.3	W9TE	442.99375	+5 MHz	--	W9TE
224.780	-1.6 MHz	--	W9FEZ	444.8750	+5 MHz	141.3	W9TE
				53.3300	-1 MHz	--	W9FEZ

FWRC Membership Application

Name: _____ Call Sign: _____
 License Class: _____
 Street address: _____ City: _____
 State: _____ ZIP: _____ Phone #:(_____) _____
 Email address: _____ ARRL Member? _____

(ARRL membership helps the club maintain ARRL affiliation)
 May we list your name, call & email address in our membership roster & on our club web site?

Fort Wayne Radio Club dues:

Regular membership	\$20.00 / year
Family membership ¹	\$30.00 / year
Student membership ²	\$5.00 / year
Associate membership ³	\$20.00 / year

(Memberships for July-December are ½ the stated amounts)

Please attach a check to this form (paying by check is strongly encouraged) made out to:
 Fort Wayne Radio Club (check number _____) and bring to a club meeting or mail to:
 Fort Wayne Radio Club
 P.O. Box 15127
 Fort Wayne, IN 46885-5127

Please list all names and calls on an attached sheet.
 K-12 or full time student.
 Unlicensed member.

ACARTS Membership Application

Name: _____ Call Sign: _____
 License Class: _____
 Street address: _____ City: _____
 State: _____ ZIP: _____ Phone #:(_____) _____
 Email address: _____ ARRL Member? _____

(ARRL membership helps the club maintain ARRL affiliation)
 May we list your name, call & email address in our membership roster & on our club web site?

ACARTS dues:

Regular membership	\$12.00 / year
Additional family members ¹	\$6.00 / year
Student membership ²	\$6.00 / year
Associate membership ³	\$6.00 / year

(New regular memberships are \$1.00/month)

Please attach a check to this form (paying by check is strongly encouraged) made out to:
 Allen County Amateur Radio Technical Society (check number _____) and bring to a club meeting or mail to:
 A.C.A.R.T.S.
 P.O. Box 10342
 Fort Wayne, IN

Please list all names and calls on an attached sheet.
 K-12 or full time student.
 Unlicensed member.