

# Allen County HamNews

Fort Wayne Radio Club Fort Wayne DX Association

Allen County Amateur Radio Technical Society

June 2022

Volume 23

Issue 6

## In this edition:

### From the Editor

Page 2

### Carole's Corner

Page 3

### FWRC Meeting Minutes

Page 4

### INQP Results

Page 5

### ACARTS Presi- dent's Message

Page 6

### Sporadic E

Page 7

### Field Day Information

Page 9

### Foxhunt

### Chronicles

Page 11

### Kenwood TS-870: A Review

Page 13

### For Sale/Wanted

Pages 16-23

### Contest Calendar

Page 24

### And much

more!

**FIELD DAY**

**SPECIAL JUNE 2022 EDITION**

**SPORADIC E**

**LOTS OF HAM GOODIES FOR SALE**

**ALLEN COUNTY HAMNEWS--STILL FREE**

# Hamming It Up With the Editor

June has arrived; Field Day 2022 is almost here; QSB and QRM thou shall not fear. OK, enough of the ridiculous poetry. A few highlights of this edition of HamNews and editorial ramblings follow:

## INQP: Results

Check out the local results for the 2022 Indiana QSO Party. Local hams should be proud of their accomplishments in putting our state on the air!

## FM Simplex Contest: Results

Chris W9TSB reports on the results from this year's FM Simplex Contest. Thank you to each of the participants and to ACARTS for sponsoring this event.

## Sporadic E

Carl K9LA provides insights on sporadic E, a form of propagation for the 6m and other bands in the summer months.

## Field Day 2022

Some preliminary information about Field Day is available in Carole's (WB9RUS) column and in the accompanying fliers.

## Hamvention 2022

Hamvention was back in force this year after a two year hiatus. While attendance was not a record, it was great to see so many hams gather for the 70th anniversary of this hamfest of hamfests.

## Wrapping Up

As I write this column, I am listening to a Spanish signal on 20m late at night. Late night operating is a favorite pastime from my college years—it is good to hear DX on the band. Have a great month and hope to see you at (or hear you on the bands for) Field Day.

73,

*Josh, W9HT*



# Allen County HamNews

HamNews is a monthly publication of the Fort Wayne Radio Club, the Allen County Amateur Radio Technical Society, and the Fort Wayne DX Association.

Articles are written by members and friends of the three clubs. New submissions for HamNews are always welcome. Please send your information to the editor within two days of the end of the month for inclusion in the next edition.

HAMNEWS EDITOR

JOSH LONG, W9HT

DRJOSHLONG (AT) GMAIL.COM

# *Hamsplatter*

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

**FROM THE FWRC  
PRESIDENT:  
CAROLE'S CORNER**



Hello again. It is truly spring and I'm loving it!

Our planned program for June, Ron Gregory, Chris Roberts, Art Saltsburg, and Don Chevillet from WOWO Radio will have to be postponed until July due to the illness of one of the speakers. So, we are now looking forward to hearing from them at the July 15<sup>th</sup> club meeting.

In lieu of the above program, we will be discussing and holding our Field Day Planning session during the June club meeting. We will be operating this year at Jefferson Township Park in New Haven because the reconstruction activity on the Spy Run Avenue Bridge over the St. Mary's River has made access to the Old Fort non-feasible during the Field Day weekend.

We will be operating a W9TE Special Events station again this year at Parkview Field during the Tin Caps vs. Lake County game on June 12<sup>th</sup>. Game time is 1:05 pm. We will be operating on phone and perhaps a little cw on 40m and perhaps 20m too. I will be interviewed by the Tin Caps Play-By-Play announcer, Mike Maahs during the fifth inning on ESPN-1380, and I will be promoting our Field Day operation as well as Ham Radio in general.

Come on down and enjoy the game and do a little operating, its lots of fun.

We will be holding the Summer Banquet on Saturday evening of Field Day at the Jefferson Township Park Field Day site. Charles Ward, KC9MUT will again be serving as our master chef preparing hamburgers and hot dogs as only he can, and the rest of the goodies will be provided, as usual by whatever attendees bring in.

If there is something you would like to see or hear in a meeting, please let me know. I have blessed with interesting and entertaining programs and presenters so far this year. I want to keep that up.

Stay well and see you on Friday, May 20 at 7:00 pm at Good Shepherd United Methodist Church on the corner of Reed and Vance.

73,

*Carole, WB9RUS*

June 2022 FWRC Activities	
Board Meeting	Club Meeting
6/7/2022	6/20/2022

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## FORT WAYNE RADIO CLUB MEETING MINUTES

13 May 2022

The May meeting of the Ft. Wayne Radio Club was held at the Good Shepherd United Methodist Church (GSUMC) on 13 May, 2022.

President Carole Burke, WB9RUS welcomed all attendees (about 17) and led them in the pledge of allegiance. Then everyone gave their name and callsign. Carole welcomed new members Joe James, W3JUB and Jim Branton, KD9VBV who were attending their first meeting.

Treasurer Bob Streeter, W8ST provided data regarding the current club Treasury statistics as of 13 May, 2022, to wit:

Savings-	\$1,844.26
Checking-	\$7,166.16
Vanguard Money Market	\$11,329.43
Year-To-Date Income	\$1,325.00
Year-To-Date Expenses	\$1,355.47
Club members count	148

Al Burke, WB9SSE reported on the latest repeater status. Al, Paul Prestia, KA3OPZ and Bruce Dennis, N3QKX made a visit to the 146.91-Echo-Link site at PFW last week (thanks to Carla Barrett, KD9ITZ who met us there and gave us access to the site). They checked out the feedline, surge arrester and jumper cables and replaced one of the jumpers and were able to get the VSWR looking into the feedline down to about 1.5:1. That is still higher than it should be and most likely is due to a failing antenna. We suspect the higher than desirable VSWR is degrading the amount of transmitter isolation provided by the duplexer at the receiver input. Replacement of the antenna would be one possible (although expensive) remedy to the problem.

We plan to experiment by installing a separate roof mounted antenna (likely a Ringo Ranger) used as a transmit only antenna, and use the tower mounted antenna for receive only. We are also planning to install a remote receiver for .91 both at the Parrott Rd. site and at Jim Wolf, KR9U's QTH, with a monopole antenna at about 90", and tie them both to voting equipment at the PFW site via the internet.

While we were at the PFW site we installed a high-pass filter in front of the 146.91 receiver that nails the FM broadcast band transmitter co-located at the .91 site but only attenuates the 2 meter band by about ½ db, and it seemed to improve the sensitivity of .91 by several db.

Bob Streeter donated a number of Cen-Tech Digital Multimeters to the club. These devices measure ac and dc voltages, dc current, resistance, diode function, can load test batteries, and provide a few more functions. We are going to offer these units to folks who are just starting out in the hobby and could use a meter, or we will offer them as attendance prizes at follow-on meetings.

Carole reported that we are investigating Jefferson Township Park (east of New Haven, near the Fort Wayne Railroad Historical Society, the Flying Circuits RC airplane complex and the Ft. Wayne Astronomical Society facilities) as the venue for Field Day because access to the Old Fort appears will be restricted due to the construction work on the Spy Run bridge over the St. Mary's river. Al has already obtained a reservation for the pavilion at the Jefferson Township facilities to accommodate the summer banquet Field Day Saturday. A final decision on the change in venue is imminent.

Carole reminded everyone that our presentation at the June meeting will feature former WOWO DeeJay and personality Ron Gregory, W9RGM who will talk about his adventures while working at the radio station during the 70's and 80's. He will be accompanied by additional WOWO personalities Chris Roberts and Art Saltsberg. We have reserved the larger Rauch Hall at Good Shepherd to accommodate the expected crowd.

Steve Nardin revealed the tentative scores reported by various operators affiliated with club call W9TE during the Indiana-QSO party last weekend. The Hoosier DX and Contest Club will have to certify it all, but it looks like we (the FWRC) finally broke the one million mark. The overall claimed tally is: 1,132,713 points, a new record for the third straight year in the INQP. Congratulations and most sincere thanks to all who participated.

Following the business meeting Steve gave a presentation on the FWRC Equipment Loaner program. Through

the donation of equipment from various club members and estates, we have a number of items that can be loaned out to club members on a temporary basis. These items include:

### **Two Yaesu FT-1000 HF multi-mode transceivers.** They feature:

100 KHz to 30 MHz receive

160M, 80M, 40M, 30M, 20M, 17M, 15M, 12M & 10M transmit,

CW / FSK / LSB / USB / AM / FM,

200 watts (50 watts AM)

Auto tuners

A multitude of bells and whistles

### **Icom 718 HF multi-mode transceiver (with power supply)**

100 KHz to 30 MHz receive

160M, 80M, 40M, 30M, 20M, 17M, 15M, 12M & 10M transmit,

USB, LSB, CW, RTTY (FSK), AM

100 watts (35 watts AM)

### **Kenwood TS-600 Six Meter all mode transceiver**

50-54 MHz

FM, LSB, USB, AM, CW modes

1 watt (FM), 10 watts (FM/SSB/CW), 5 watt (AM)

### **MFJ 160M to 70cm Antenna Analyzer**

### **Pico 4 channel Oscilloscope**

### **MFJ/Benchner Key and a brass Side Swiper**

Steve is managing the loaner program for the club. Please contact him if you might have an interest in borrowing one of these items.

The meeting adjourned about 8:15 pm.

Respectfully submitted,

*Al Burke, WB9SSE*

Secretary, Fort Wayne Radio Club



# Indiana QSO Party 2022

## *A New Club Record*

Once again, members of the Fort Wayne Radio Club met the challenge to keep FWRC #1 in the club competition category of the Indiana QSO Party. Some great scores and all time personal best for some members. The **W9TE** multi multi had three stations running adding nicely to our score. **AC9XS** completed his first ever INQP with his backyard portable hamsticks. **AC9EZ** went up against the big guns with his qrp 5 watt effort scoring, perhaps, #1 in the qrp category. **WA9BBN** turned in a great score while adding the K1EL WinKeyer to his station. **W9HT** continues to turn in big scores and this year was no exception. **K9FW** turned in his all-time high score thanks to his adding SSB to his operation thereby significantly increasing his multiplier count and additional qso's! **KR9U** operated single op hi power and surpassed the 200K score! **W9GT** claims his highest score ever in INQP taking first place in Allen County. **N8KR** sat on a county line for the duration of the event.

<b>W9TE MULTI</b>	<b>58,926</b>
<b>KB9OZI</b>	<b>3,450</b>
<b>AC9XS</b>	<b>4,600</b>
<b>W9SA</b>	<b>16,280</b>
<b>WB9DLC</b>	<b>23,816</b>
<b>KU8T</b>	<b>26,656</b>
<b>AC9EZ (QRP)</b>	<b>44,500</b>
<b>WA9BBN</b>	<b>45,000</b>
<b>W9HT</b>	<b>79,074</b>
<b>K9FW</b>	<b>80,640</b>

And now for the 3 big scores:

<b>KR9U</b>	<b>201,235</b> hi power Allen Cty
<b>W9GT</b>	<b>229,000</b> hi power Allen Cty
<b>N8KR</b>	<b>319,536</b> portable Lagrange/Steuben

So, did FWRC hit the MILLION mark this year? You total up the above claimed scores and see for yourself! Keep in mind, these are all claimed scores and have not yet been checked for errors.

Big Score Stats:

KR9U	468 cw qso's 269 ssb qso's	737 total qso's	63/hr
W9GT	320 cw qso's 625 ssb qso's	945 total qso's	79/hr
N8KR	478 cw qso's 945 ssb qso's	1426 total qso's	118/hr

# State of the Arts

Allen County Amateur Radio Technical Society

P.O. Box 10342, Fort Wayne, IN



Hello everyone!

Our last board meeting was on May 10<sup>th</sup> and was our first virtual meeting. The virtual meeting worked out very well and will be utilized more often. We went over some details for the upcoming HamFest and started organizing speakers for the forums. We still have the Secretary position open on the ACARTS board. If anyone is interested in being a part of our board, please email me at w9tsb(at)outlook.com.

Our last general meeting was on the 17<sup>th</sup> of May 2022 and was a virtual with Kevin KB9RLW. It was a Q&A with Kevin. The topics ranged from RV living, Ham radio, audio recording, and more. The meeting was recorded and is posted on YouTube, the link can be found on the ACARTS website: [www.acarts.com](http://www.acarts.com).

The results of the 2022 VHF/UHF FM Simplex contest are as follows:

1<sup>st</sup> Place Base Category – Bob Marschand, K9BLI



1<sup>st</sup> Place Rover Category – Josh Long, W9HT



1<sup>st</sup> Place Portable Category – Jim Danielson, AC9EZ



Thanks to all that participated in the contest!

Thank you, all!

73,

*Chris McCullough, W9TSB*

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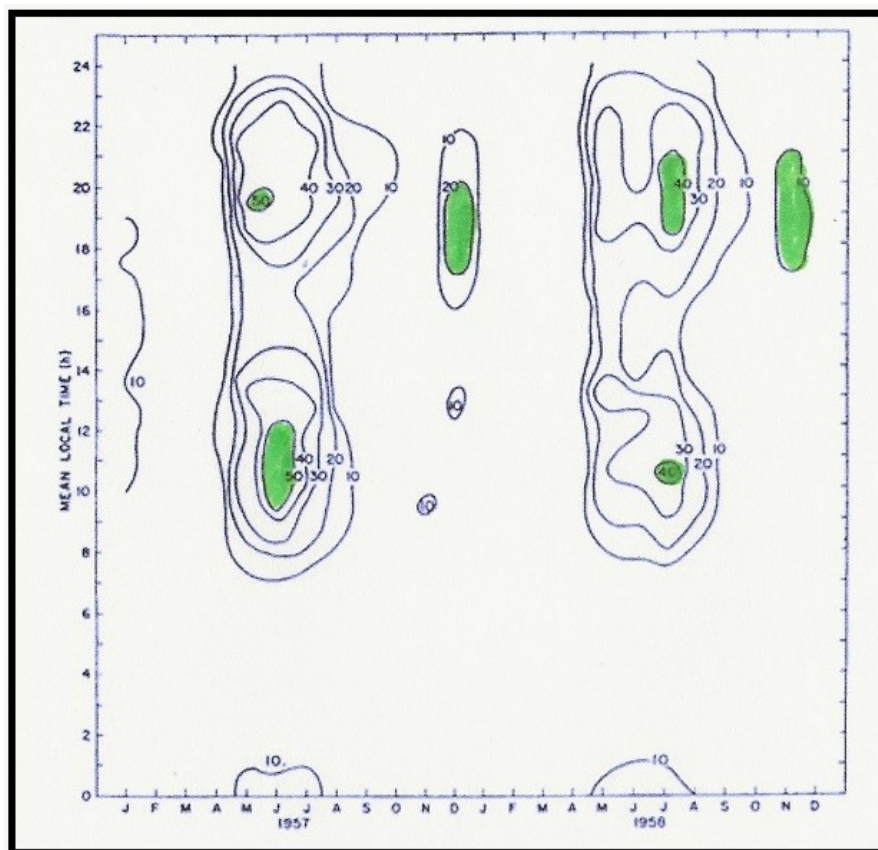
# Sporadic E

By Carl Luetzelschwab K9LA



It's the beginning of June, and the sporadic E (Es) season is under-way. I've seen spots on PacketCluster and at [www.dxmaps.com](http://www.dxmaps.com) reporting sporadic E QSOs. Let's review the short-term and long-term patterns of sporadic E.

The July 2006 FWDXA column discussed summer DXing on 6-meters, and included an image showing the probability of a sporadic-E opening versus local time of day and month. Figure 1 reproduces this image (but with some color now!).



**Figure 1 – Short-term 6-meter Es probabilities**

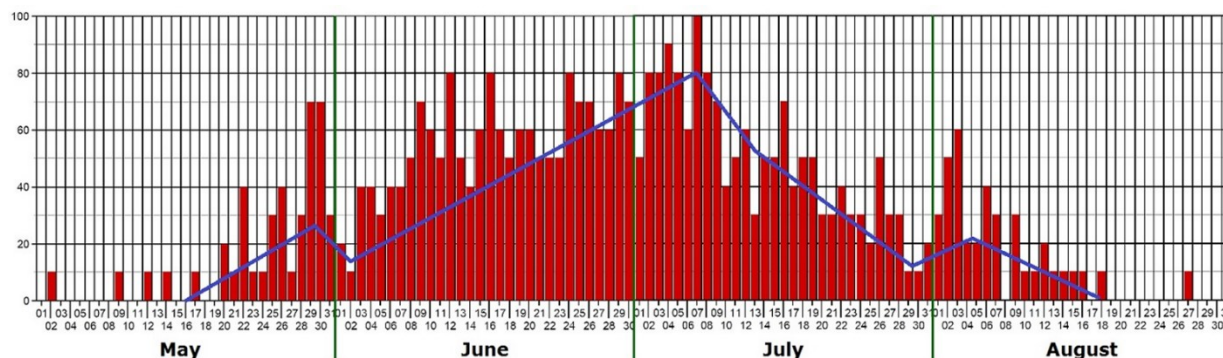
The horizontal axis is month (for a two year period), and the vertical axis is local time. The contour lines show the probability (in percent) of a sporadic-E opening. The green shading indicates the highest probabilities, which are late morning and early evening in the summer months. But don't rule out other times – there are still probabilities, just smaller. Note that the data of Figure 1 was for 1957 and 1958. Although the data is old, it is still relevant when compared to more recent data using occultation of GPS signals.

The May 2009 FWDXA column looked at the same probabilities in a different format – a column chart with the horizontal axis the local time in the months of May, June and July and the vertical axis the probability.



We have good data with respect to the short-term variability of sporadic-E over a day, a month and a couple years. What about longer-term data over multiple years? In their March 1992 QST article titled “Eleven Years of Sporadic E”, Emil Pocock W3EP and Pat Dyer WA5IYX reported on the monitoring of the 88-108 MHz FM band from San Antonio over the 11 year period of 1980 to 1990. WA5IYX listened from 7AM to midnight every day (he only missed 58 days during the 11 year period). There are lots of good charts summarizing the data.

More recently, Kevin Gibeau VE3EN (the author of the website <https://www.solarham.net/>) reported on sporadic E on 6-meters from 2004 through 2014. He noted when eastern/western Europe worked the northeast of North America (call areas 1, 2, 3, 4, 8 and 9 in the US and call areas VO1, VE1, VE2, VE3, VE9 and VY2 in Canada). He only counted days when 5 or more contacts between multiple stations were made. Figure 2 is VE3EN’s plot of his data for all 11 years.



**Figure 2 – Long-term 6-meter Es probabilities**

The vertical axis is the percent of the 11 years that had sporadic E on a given day. For example, on June 12, 80% of the years (9 years) had sporadic E QSOs on 6-meters.

Although VE3EN’s plot is for eastern North America to eastern/western Europe, his results can give us a general idea of what we can expect for intercontinental sporadic E in the US. With Field Day coming up, review the data in Figures 1 and 2 and plan accordingly. Good luck and have fun!





**The most popular on-the-air operating event in Amateur Radio.  
Gear up and get in on the action!**

**PARTICIPATE IN YOUR LOCAL  
ARRL FIELD DAY JUNE 25–26, 2022  
All are Invited!**

Jefferson Township Park  
Address: 1702 Webster Rd,  
New Haven, IN 46774  
Starting at 2pm on Saturday!

**[arri.org/FieldDay](https://arri.org/FieldDay)**

## What is ARRL Field Day?

Field Day is a picnic, a campout, practice for emergencies, an informal contest and, most of all, FUN!

ARRL Field Day is the single most popular on-the-air event held annually in the US and Canada. On the fourth weekend of June of each year, more than 35,000 radio amateurs gather with their clubs, groups or simply with friends to operate from remote locations.

It is a time when many aspects of Amateur Radio come together to highlight our many roles. While some will treat it as a contest, other groups use the opportunity to practice their emergency response capabilities. It is an excellent opportunity to demonstrate Amateur Radio to the organizations that Amateur Radio might serve in an emergency, as well as to the general public. For many clubs, ARRL Field Day is one of the highlights of their annual calendar.

The contest part simply involves contacting as many other stations as possible while learning to operate our radio gear in abnormal situations and less than optimal conditions.

We use these same skills when we help with events such as marathons and bike-a-thons; fund-raisers such as walk-a-thons; celebrations such as parades; and exhibits at fairs, malls and museums—these are all large, preplanned, non-emergency activities.

But despite the development of very complex, modern communications systems—or maybe because they ARE so complex—ham radio has been called into action again and again to provide communications in crises when it really matters. Amateur Radio operators (also called “hams”) are well known for our communications support in real disaster and post-disaster situations.

## What is the ARRL?

With more than 160,000 members, the ARRL is the national association for Amateur Radio in the USA. ARRL is the primary source of information about what is going on in ham radio. It provides books, news, support and information for individuals and clubs, special events, continuing education classes and other benefits for its members.

## What is Amateur Radio?

Often called “ham radio,” the Amateur Radio Service is a worldwide community of licensed operators using the airwaves with every conceivable means of communications technology. It is made up of people who enjoy learning and being able to transmit voice, data and pictures through the air to places both near and far without depending on commercial systems.

The Amateur Radio frequencies are the last remaining place in the usable radio spectrum where you as an individual can develop and experiment with wireless communications. Hams not only can build and modify their equipment, but we create whole new ways to communicate via the airwaves.



**ARRL** The National Association for  
**Amateur Radio®**

[arrrl.org/FieldDay](https://arrrl.org/FieldDay)





MAY 2022

May 1<sup>st</sup> produced a beautiful day for foxhunting. Consequently, the team of Carole and Al Burke, WB9's RUS & SSE plus Jim and Annie Pliett, K9OMA & WB9YYI, and the team of Steve Nardin, W9SAN and his grandson Alex showed up at our foxhunting starting point of Corbin Park, all hot to trot. Steve was sporting a new mobile foxhunting setup that features a ten element yagi that he was anxious to try out for the first time. He said it was advertised as having low sidelobes and a great front-to-back ratio.

Charles Ward, KC9MUT served as the fox for this one. He was camped out at Lawton Park just south of Science Central (@41.0882605,-85.1386821) amidst the baseball diamonds. To take advantage of the Fort Wayne skyline, his antenna was pointed not at the Fox Hunters, but at the buildings downtown (to make things interesting with multipath signals). He hid the microfox inside a baseball diamond light standard that pretty effectively attenuated its signal, especially the third harmonic.

Foxhunting operations started promptly at 13:30 with high power transmissions from Charles' truck and the signal was heard by both foxhunting teams. For some reason, the Burke/Pliett's team first bearing pointed due east where-as the actual location of the fox was almost due west of Corbin Park. So they took off to the east by heading south on Coliseum and then east on US 930 towards New Haven. We assume the Nardin team got a correct initial bearing and headed west on Washington toward downtown Fort

Wayne.

As the Burke/Pliett team was driving along US 930 towards New Haven they realized that the signal was actually coming from behind them so they headed north on Maplecrest and then west on Lake and wound up checking out the old Lakeside Bowl and Event Center property thinking that the evil Charles was trying to pull a fast one on them. But alas, they then realized that the fox was further to the west south-west so they proceeded down State to Clinton and eventually discovered Charles in Lawton Park. At that point they started hearing the microfox (but never did hear its third harmonic).

Meanwhile, Steve and Alex had been doing circles in downtown Fort Wayne as the reflected signals were proving difficult to localize. They finally made their way to the VFW hall on the hill on the west side of town, and this provided a really good fix to the correct direction.

A funny moment occurred when Steve and Alex arrived at an intersection over by Fourth Street. There were 4 cars and 4 drivers, who, upon seeing the antenna on the sunroof of the van, seemed to get nervous, jump into their cars and depart in different directions rather quickly! A moment later, they saw all four together again heading east on Fourth Street. Hmmm.....Alex and Steve wondered what this could be all about.

It was right after this curious moment that they started hearing the microfox with a very strong bearing to Lawton Park. Sure enough, as they passed eastbound on Fourth Street, Charles' pickup truck was visible.



Turns out that Steve and Alex had localized and then found the microfox before the Burke/Pliett team so they were the winners on this hunt, with Alex first to find the microfox. I'd say that Steve's new DF antenna did right by him. His new attenuator was not working as hoped, so that will have to be rebuilt, but they love the new Diamond 10 element 2 meter beam, which turns out is much easier to mount on the vehicle as well.

Following the hunt, we proceeded over to Hall's Hollywood restaurant and consumed mass quantities.

The foxhunt scoring matrix is as follows:

FOXHUNTER	MAY 2022 SCORE	YTD SCORE
WB9SSE	1	3
WB9RUS	1	3
K9OMA	1	2
KA9YYI	1	2
KC9MUT	1	9
W9SAN	2	5
W9LAN	0	3
ALEX	3	6
KD9TST	0	2
KD9TTK	0	2
KD9TTL	0	2
IAN	0	2

The next foxhunt will occur on Sunday June 12<sup>th</sup> (note the date) starting at 13:30 from Corbin Park with Steve Nardin and crew serving as the fox. Why not come out and join us?

73,

*WB9SSE & W9SAN*



**LATE  
BREAKING  
NEWS**



**THE JUNE FOX  
HUNT HAS  
BEEN  
CANCELLED.  
LOOK FOR  
THE FOX  
HUNTS TO  
RETURN ON  
JULY 10TH.**



### **An Old Classic – the Kenwood TS-870s**

Recently, I had the opportunity to play with an older radio – a Kenwood TS-870s. For those of you who are not familiar with this particular radio, the TS-870s was a contest-level radio built by Kenwood right at the turn of the millennium. A large radio, the '870s was a hefty rig, both in terms of price and weight, and contained one of the first generation dsp-filtering techniques employed in hf rigs. In this month's article, we are going to take a look at what made the '870s unique, especially compared to some of the other contest-style hf rigs built at the time.

#### **Some History:**

Let's start with some background history to the '870s. The Kenwood TS-870s was produced from about 1995 to 2004. A product review article appeared in *QST* magazine in the February, 1996 issue. The initial suggested retail price, according to the *QST* review, was just under \$3200 – quite a hefty price! According to the website "usinflationcalculator", the same radio would cost almost \$5,900 in today's dollars – a comparable price to several of the higher-end rigs currently on the market.

At the time Kenwood made the TS-870s, two other radios from other manufacturers were also in the same higher-end price market. Those radios included the Yaesu FT-1000mp, and the Icom IC-746. The FT-1000 was originally introduced in 1990, and underwent several permutations, with the FT-1000mp hitting the market in 1996 and the Icom IC-746 arriving in 1997. The FT-1000mp originally sold

for \$3600, while the Icom IC-746 retailed for \$2,280. The IC-746 isn't really in the same price league as the Kenwood or Yaesu rigs, but it's interesting to include the 746 for the sake of a technology comparison.

One other item of note about the '870s is its use of dsp in the intermediate-frequency ("IF") stages of the radio. The '870s was a quadruple-conversion superhet receiver, with intermediate frequencies of 73.05 Mhz., 8.83 Mhz., 455 Khz., and 11.3 Khz. The use of so many conversion stages meant that Kenwood could apply a lot of filtering, with filtering occurring at each frequency stage. The fact that the dsp (digital signal processing) occurred within the IF stage of the receiver chain meant that sharper filtering could be achieved. Kenwood could have decided to only use an audio-based dsp, with the dsp filtering only applying to the audio signal emitted by the speaker, but they elected to go





with the more selective IF design.

### **The TS-870s from a features standpoint**

Kenwood ticked a lot of boxes with the '870s, with features galore for both cw and ssb operators. Of particular note, the '870s included a memory keyer for cw, allowing for multiple messages to be programmed into the rig and then sent, such as a "cq contest" message. SSB operators would appreciate the easy front-panel access to the rig's speech processor, power output control, and "monitor" feature, allowing one to hear one's transmitted audio quality.

Probably one of the most distinguishing characteristics of the '870s was the fact that the rig did not include any slots for optional crystal filters. This was a departure from a practice normal at the time of including optional filter slots, such as those found in the FT-1000mp and IC-746. It's interesting to ponder the question as to why Kenwood chose this route of receiver design. Was Kenwood thinking that the dsp filtering was solid enough to not require the need of additional filters? Was the product cost high enough that any additional options like optional filters would have pushed the cost to unacceptable levels?

It's really hard to even guess as to what all went into Kenwood's decision to not include the optional filter slots. It can only be assumed that Kenwood viewed

the trade-offs between selectivity and cost, and elected to go with a lower cost solution to the interminable issue of receiver filtering.

Even though there are no optional filter slots included by Kenwood in the '870s, there is a modification that can be done by the '870s owner. If one searches on google for "870s modifications", several websites will pop up that detail the steps necessary to "hot wire" narrower filters into the receiver chain of the radio.

Lastly, let's take a quick look at some receiver values as posted on the website of Rob Sherwood Engineering. This website contains a plethora of information on tests conducted on a multitude of amateur radio transceivers. According to Sherwood's website, the '870s has a comparable receiver to both the Yaesu FT-1000mp Mark V Field, and the Yaesu FT-1000D, with a 2-Khz. dynamic range of 69 dB listed for all three radios. A separate category of the Mark V Field with a roofing filter modification placed the Mark V Field at a slightly higher level, but only with an increase of a 2 dB higher dynamic range. Another Sherwood Engineering document places the IC-746 with a dynamic range of 70 dB – only a 1 dB difference amongst the three radios.

Just for sake of comparison, the top-of-the-line rigs of today have 2-Khz. dynamic ranges of 100

dB or better, but that's using today's technology and the '870s is more than 20 years old. Also, most modern radios include roofing filters, with options for even tighter roofing filters. Back in the late 90s/early 2000s, roofing filters were a luxury, not the norm.

### **Conclusion:**

In summary, the Kenwood TS-870s is a great example of what was considered a high-end contest radio at the turn of the millennium. Review after review of this radio, both online and from personal conversations, attest to the fact that the 870s is a classic contest radio.

*73 de Jim AC9EZ*



The Northeastern Indiana Amateur Radio Association

# AUBURN HAMFEST

*New Date!* **Saturday, August 13, 2022**

Auburn Cord Duesenberg Museum

**1600 S. Wayne St. Auburn, IN 46706**

OPEN 9 AM TO 2 PM • TALK-IN: 147.015 (141.3) 7:00 AM • LOAD-IN: 7 TO 9 AM

**FREE** Admission

6,000 SQ. FT. INDOOR DISPLAY SPACE (Not counting the huge Museum Area!)



**FREE** Parking

Supervised by the DeKalb County ARES Team.



**FREE** AUBURN CORD DUESENBERG Museum

View an amazing collection of classic motor vehicles.

**NEW this year—FOOD VENDOR**  
on the parking lot.

**NEED MORE INFO?**  
**E-MAIL: W9OU@ARRL.NET**

**Indoor Vendor Tables: \$10 ea.**  
Order online now at [www.w9ou.org](http://www.w9ou.org)

**Outdoor Sales** - One raffle ticket purchase for each parking space.

**Contact: [W9OU@ARRL.NET](mailto:W9OU@ARRL.NET)**

## Raffle Prizes:

- 1st-** Xiegu G90 HF Radio with Base
- 2nd-** Yaesu FT-70DR with Mag Mount Ant.
- 3rd-** N3FJP Logging software—Full Reg.
- 4th-** \$50.00 DX Engineering Gift Cert.

***Ticket Prices \$5.00 - Buy 2, get 1 Free!***

## **Drake Equipment and accessories for sale:**

Drake R-4C Receiver.S/N 27636. Excellent condition. 160 through 10 meters (28.0-28.5 and 28.5-29.0) 10 Additional crystals; 13.1, 15.6, 18.6, 20.1, 20.6, 24.6, 26.1, 26.6, 35.6, and 38.1. No filters.Original Drake manual included. \$300 plus shipping.

Drake T-4XC Transmitter S/N 30048. Excellent condition. Original Drake manual, 4 spare 6JB6 final tubes and 1 spare 12BY7 driver tube included.\$300 plus shipping.

Drake MS-4 Speaker in excellent condition with original cable. \$75 plus shipping.

Drake AC-4 #1 Power Supply S/N 56896 electrically restored using the Heathkit Shop board. 120/220 switch. \$200 plus shipping.

Drake AC-4 #2 Power Supply S/N 36892 electrically restored using the Heathkit Shop board. No voltage switch. \$200 plus shipping.

Drake AC-4 #3 Power Supply S/N 56517 electrically restored using the Heathkit Shop board. No voltage switch. \$200 plus shipping.

Drake 4-NB Noise Blanker board for the R-4C. Works.\$200 plus shipping.

FL-250 250 Hz CW filter for the R-4C \$80 plus shipping.

FL-500 500 Hz CW filter for the R-4C \$75 plus shipping.

FL-1500 1500 Hz SSB filter for the R-4C \$75 plus shipping.

FL-6000 6KHz AM Filter for the R-4C \$100 plus shipping.

Original Drake Cable set in good condition and labeled. \$50 plus shipping.

Drake W-4 SWR/Power Meter in good condition. Early S/N.Probably needs a tune up as it measures consistently high on power out. SWR is OK. \$100 plus shipping.

Torrestronics Digital frequency display. Good shape and working as it should. Printed manual copy. \$100 plus shipping.

Sure Model 444 Microphone w/Cable and manual. \$100 plus shipping.

Palstar CW50A Electronic keyer. \$75 plus shipping.

Drake TR-4C relay board with Relay. \$20 plus shipping.

Drake TR-4C Mode Switch.\$10 plus shipping.

Drake original R-4C manual.\$25 plus shipping.

Autek Research QF-1A Active Audio Filter w/ manual copy and cables. \$75 plus shipping.

Payment via cash at pick up; US Postal Money Order; Personal Check (clears before I ship); PayPal OK +3.5% fee.

Thanks! Mike N9QR





Kenwood TS-590SG HF transceiver for sale. In very good cosmetic and operating condition (display is clear--I will have to fire my photographer). This radio has been my primary HF radio for several years, but was recently replaced with an Elecraft. Includes the manual, power cord, hand microphone, and box. \$900. Contact the editor at drjoshlong (at) gmail.com.

**KENWOOD**



**120+ feet of Belden 8214 coax in EXCELLENT condition. Low loss, (burial coax) copper stranded center, 97% copper braided shield. PL-259 on one end. \$100. Contact N8KR at [n8kr \(at\) arrrl.net](mailto:n8kr@arrrl.net).**





**Alpha 76A HF amplifier. This amp has two Eimac 8874 tubes. This has been in service at my station for the past two years and has performed well, but recently had chance to upgrade to another larger Alpha amp. Last year I replaced the two tubes with newer-old-stock Eimac 8874 tubes. In addition to the amp, I am including a spare 8874 tube. More photos available upon request. \$1000 or open to trades for other ham equipment. Pickup in Fort Wayne, IN or will meet within 100 miles.**

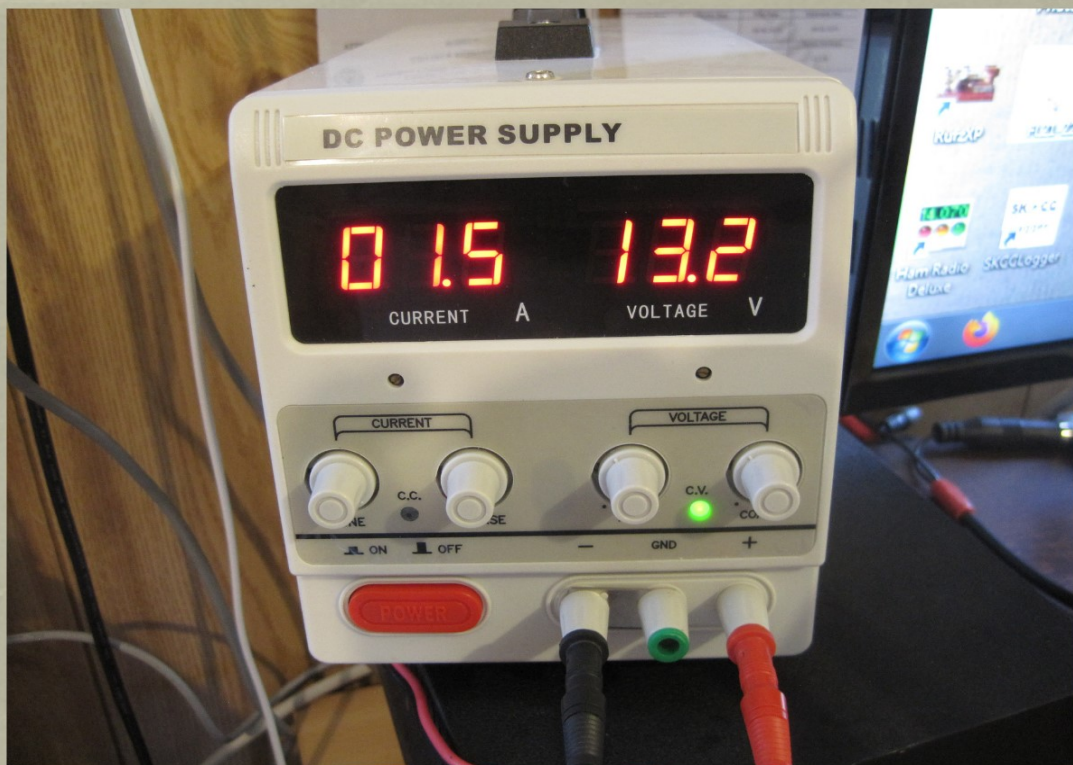
Contact the editor for more information at  
drjoshlong (at) gmail.com





**120+ feet of Belden 8214 NEW ON SPOOL - low loss copper 97% shield. \$120. Contact N8KR at [n8kr \(at\) arrrl.net](mailto:n8kr@arrrl.net).**

# FOR SALE



Power Supply - 0-30v dc output (variable),  
0-10 amps. Picture shows voltage and  
current on receive of my K3. \$20

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**CONTACT N8KR AT N8KR (AT)  
ARRL.NET**





**Belden 9913 coax - very low loss - over 80 feet used but in excellent condition. Has pl-259 on one end. \$60. Contact N8KR at [n8kr \(at\) arrrl.net](mailto:n8kr@arrrl.net).**



# FOR SALE



## YAESU VX-170 2M HT \$65

The radio is in nice condition, works well, and includes the manual, drop-in charger, antenna, belt clip, and everything else in the picture.

**CONTACT THE EDITOR AT  
DRJOSHLONG (AT) GMAIL.COM**

# SELECTED CONTESTS JUNE 2022

Key:

<p><b>4-5</b></p> <p>Kentucky QSO Party, 1300Z, June 4 to 0100Z, Jun 5</p>	<p><b>18</b></p> <p>ARRL Kids Day, 1800Z-2359Z, Jun 18</p>	<p><b>July 1</b></p> <p>RAC Canada Day Contest, 0000Z-2359Z, Jul 1</p>	<p>Date</p> <p><b>Event</b></p> <p>Dates/Times</p>
<p><b>4-5</b></p> <p>ARRL International. Digital Contest, 1800Z, Jun 4 to 2400Z, Jun 5</p>	<p><b>22</b></p> <p>SKCC Sprint, 0000Z-0200Z, Jun 22</p>		
<p><b>11-12</b></p> <p>SKCC Weekend Sprintathon, 1200Z, Jun 11 to 2400Z, Jun 12</p>	<p><b>25-26</b></p> <p>His Maj. King of Spain Contest, SSB, 1200Z, Jun 25 to 1200Z, Jun 26</p>		
<p><b>11-13</b></p> <p>ARRL June VHF Contest, 1800Z, Jun 11 to 0259Z, Jun 13</p>	<p><b>25-26</b></p> <p>ARRL Field Day, 1800Z, Jun 25 to 2100Z, Jun 26</p>		

*This information comes from the WA7BNM Contest Calendar at [contestcalendar.com](http://contestcalendar.com) and is gratefully acknowledged. It is deemed accurate as of the time of publication.*

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	3.912	Daily Indiana Traffic Net	8:00 PM	50.580 USB	FWRC 6-Meter SSB Net
6:00 PM	3.910	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. <b>Any changes or corrections should be submitted to the newsletter editor at drjoshlong (at) gmail.com.</b> 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: <a href="http://www.inarri.org/index.php/public-service/indiana-nts">http://www.inarri.org/index.php/public-service/indiana-nts</a>					

Area Repeaters (updated as of 6/1/22)							
Frequency	Offset	Tone/Notes	Callsign	Frequency	Offset	Tone/Notes	Callsign
53.3300	-1 MHz	--	W9FEZ	442.6375	+5 MHz	MDR CC1	N9MTF
145.330	-0.6 MHz	--	W9FEZ	442.99375	+5 MHz	D-Star W9TE-B	W9TE
146.880	-0.6 MHz	--	W9INX	443.100	+5 MHz	DMR CC1	K9MMQ
147.255	+0.6 MHz	--	W9INX	443.275	+5 MHz	P25 NAC # 293	K9MMQ
146.760	-0.6 MHz	141.3	W9TE	444.250	+5 MHz	141.3	W9AVW
146.910	-0.6 MHz	--	W9TE	444.800	+5 MHz	--	W9FEZ
146.940	-0.6 MHz	141.3 FM / C4FM	W9TE	444.8750	+5 MHz	141.3	W9TE
224.780	-1.6 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	\$25.00 / year
Family membership <sup>1</sup>	\$35.00 / year
Student membership <sup>2</sup>	\$5.00 / year
Associate membership <sup>3</sup>	\$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 <sup>1</sup>	\$6.00 / year
Student membership <sup>2</sup>	\$6.00 / year
Associate membership <sup>3</sup>	\$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.