



## February 2018 Newsletter

### Southeast Kansas Amateur Radio News

#### SEKARC Winter Field Day Results

Great job by everyone involved. SEKARC hit it out of the park again! Here are some numbers and some photos from the event. A big THANK YOU to all. A special thanks goes out to John ADØKA for the use of his propane generator, that thing was a CHAMP!!



It was a great test run for the GoBox. We found some things we need to adjust to the setup like a headphone jack option, we need an SD card for the ft-891 to record CQ calls, and the tuner needs to be tested further. There were a few other things so if you operated it this weekend and have some ideas please let us know. A GoPro video is available: <https://quik.gopro.com/v/WVuJpCcyae/>

Here are the stats for K0SEK Winter Field Day 2018

K0SEK's Contest Summary Report for WFD

Created by N3FJP's Winter Field Day Contest Log

Version 2.1 [www.n3fjp.com](http://www.n3fjp.com)

Total Contacts = 409

Total Points = 2,405

Operating Period: 2018/01/27 19:08 - 2018/01/28 18:55

Total op time (breaks > 30 min deducted): 9:51:41

Total op time (breaks > 60 min deducted): 11:56:33

Avg Qs/Hr (breaks > 30 min deducted): 41.5

Total Contacts by Band and Mode:

Band	CW	Phone	Dig	Total	%
80	0	199	0	199	49
40	0	108	21	129	32
20	0	30	51	81	20
<b>Total</b>	<b>0</b>	<b>337</b>	<b>72</b>	<b>409</b>	<b>100</b>

## Correction – To MARS-AFMARS in Content Highlights

It was brought to my attention that MARS changed from Amateur to Auxiliary Radio Service nearly a decade ago. My apologies to those serving as MARS operators. Kent, KAR Ed

## KB6NU Blogs Regarding ARRL vs myARRLvoice.org

ARRL president [Rick Roderick, K5UR](#), [complained](#) that the ARRL's Board of Directors—a group of hams, some of whom are well-intentioned, but who may have been misled—has been the subject of an organized misinformation campaign. This letter is part of an organized effort to spin some of the awful decisions that the board has made in the past year, including the adoption of the [ARRL Policy on Board Governance and Conduct of Members of the Board of Directors and Vice-Directors](#) (aka "Code of Conduct") and the censure of Southwestern Division Director Dick Norton, N6AA.

Over the past couple of weeks, I've seen similar statements by various directors responding to inquiries from amateurs in their divisions. The words are slightly different, but these responses all seem to come from the same set of talking points, and like most political gobbledygook, the script is meant to obfuscate rather than elucidate. The board's actions speak louder than its words, however. Look at what they've done rather than what they're saying.

For example, Roderick says, "The principal suggestion is that ARRL operates under some "cloak of secrecy." The criticism is unfair and undeserved," and in a later paragraph, "The ARRL Board does seek thoughtful, informed input on policy issues concerning Amateur Radio from its roughly 150,000 members." I would like to ask when the members were asked for "thoughtful, informed input" on the awful ARRL Policy on Board Governance and Conduct of Members of the Board of Directors and Vice Directors? The [ARRL Letter of Jan 19, 2017](#) does not mention that the Code of Conduct will be discussed at this meeting, nor does the published [meeting agenda](#). Nor does my director, Dale Williams, WA8EFK, mention it in his December 2016 "Dale's Tales." It's awful hard for members to provide input when they don't know what's going to be discussed.

As if to further discount the "cloak of secrecy" argument, Roderick says, "When it [the Code of Conduct] was adopted by the Board a year ago, it was posted for ARRL members to read.". He's right about that, but they certainly didn't go out of their way to draw any attention to it. There was no news item about it, nor is it mentioned it mentioned in the [2/9/17 ARRL Letter](#) item that discussed what transpired at the board meeting. Nor did WA8EFK inform the GL Division members that he voted for it in his January 2017 message to the Great Lakes Division. So, while the Code of Conduct wasn't entirely cloaked in secrecy, the ARRL certainly didn't go out of its way to inform members that it had been passed or what it contained. Frankly, if I were on the ARRL board, I wouldn't want it publicized either.

To be fair, as I've written, I don't disagree with most of the Code of Conduct. It calls for directors to be financially responsible and to treat staff members with respect. Who can argue with that?

What's at issue here are those sections that restrict a director from speaking his or her mind. While those sections may be appropriate for a corporate board of directors or the board of directors of a nonprofit corporation whose board members are appointed, they are not appropriate for a board whose members are elected by the membership.

That brings us to the censure of Dick Norton, N6AA. The ARRL Board's decision to censure was prompted by his alleged violation of that policy. Neither Roderick nor any of the directors who voted for the censure have seen fit to present the evidence, except to say things like, "Unfortunately, it was necessary for the Board to take the highly unusual action of publicly censuring one of its members recently," and "The vote was 11 to 3, so trust us, what he did was really bad." They have refused to explain their decision any further, even when the statements in support of Mr. Norton would seem to refute the board's reasoning for the censure. If that's not a cloak of secrecy, I'm not sure what is.

Finally, I'd like to address the proposals to amend the Articles of Incorporation and ARRL By-Laws at the board meeting being held this weekend in Newington. Roderick says, "ARRL member input is welcome on all such subjects. Indeed, the recommended Article and Bylaw changes were not considered to be Board confidential." If they were not considered to be confidential, why the whining about their publication before the meeting? Roderick says the proposals are being "mischaracterized or misrepresented," but offers no explanation for this opinion. I guess any criticism quickly becomes mischaracterizations and misrepresentations instead of thoughtful, informed input in the eyes of the ARRL board.

I don't doubt that the directors are "smart, dedicated radio amateurs" who devote many hours of their own time and try to represent us as best they can. But so are we. I and thousands of other smart, dedicated amateur radio operators personally devote many hours of our own time to promote the hobby and help people have more fun with amateur radio. I don't see how the Code of Conduct, the censure of N6AA, and other questionable board actions are serving the amateur radio community. I don't think that "the Board absolutely understands that the members are the organization" and that it's the board's "disinformation and lack of candor" that's precipitated this debate. Time will tell how this all plays out. I do know that these latest board moves have prompted many to not only criticize the ARRL Board, but also get organized and challenge them in upcoming elections. In my mind, that's a good thing. Heck I'd even run again myself, but since I now make part of my living selling amateur radio products, I'm sure I'd be disqualified.

*Printed by permission from Dan Romanchik, KB6NU <http://www.kb6nu.com/k5urs-note-members-obfuscates-rather-elucidates/>*



# S.A.T.E.R.N.

Salvation Army Team Emergency Radio Network

Latest W MO/KS Newsletter

<http://ksarri.org/satern>

## Central Kansas Repeater Group Seminar

On February 3rd, the CKRG (Central Kansas Repeater Group) held a seminar type gathering at the Perkins Restaurant in Great Bend, KS. The 2 hour talk featured 'How To' use C4FM Fusion and DMR modes on different radios and repeaters. They discussed Brandmeister repeaters, etc. They had several different models of hand helds and open spot et al type interfaces. Very nice slide show, well put together. Provided by Richard Johnson, KØRCJ

## Kansas Special Events

### SE Kansas Mining Special Event Series 1 of 7

**Mar 24-Mar 25, 1400Z-2300Z, K0SEK**, Pittsburg, KS. Southeast Kansas Amateur Radio Club. 18.140 14.250 7.242. Certificate & QSL. K0SEK Attn: Chancey, 409 W. Quincy St., Pittsburg, KS 66762. Crawford County Historical Museum is the 1st of 7 Special Events recognizing the mining history in SE Kansas !! See web page for details including QSL and Certificate info.

<http://www.sekarc.net/p/sek-mining.html>

## Kansas Traffic Net Schedule

<b>UPDATED September 5, 2017 22:37</b>				
<b>Days</b>	<b>Time</b>	<b>Mgr</b>	<b>Freq</b>	<b>Net Name</b>
M, W, F	6:45AM	KB0PPQ	3920 KHz	Kansas Phone Net
Daily	7:00AM	WB0YWZ	3920 KHz	Kansas AM Weather Net
Sat, Sun	8:00AM	KB0PPQ	3920 KHz	Kansas Phone Net
Mon -Fri	12:30PM	KE0DL	7253.5 KHz	Central States Traffic Net
Daily	6:00PM	WB0YWZ	3920 KHz	Kansas Weather Net
Daily	6:30PM	KB0PPQ	3920 KHz	Kansas Sideband Net
Daily	7:00PM	NB0Z	3547 KHz	QKS CW NTS Traffic Net
Mon	7:30PM	WD0ESF	3547 KHz	QKS SS CW Traffic Net
Daily	10:00PM	NB0Z	3547 KHz	QKS CW NTS Traffic Net

### Links for Kansas Hams!

ARRL	<a href="http://www.arrl.org">http://www.arrl.org</a>
ARRL KS Section News Page	<a href="http://www.arrl.org/Groups/view/kansas">http://www.arrl.org/Groups/view/kansas</a>
ARRL Midwest Director's Newsletter	<a href="http://www.arrlmidwest.org/newsletter/newsletter.pdf">http://www.arrlmidwest.org/newsletter/newsletter.pdf</a>
Kansas Section Pages and KAR's	<a href="http://ksarri.org/">http://ksarri.org/</a>
S. A. T. E. R. N.	<a href="http://www.SATERN.salvationarmy.us">http://www.SATERN.salvationarmy.us</a>
Kansas QSO Party	<a href="http://ksqsoparty.org">http://ksqsoparty.org</a>
Newton ARC	<a href="http://newtonarc.org/">http://newtonarc.org/</a>
Wichita ARC	<a href="http://www.warc1.org">http://www.warc1.org</a>
Ensor Museum	<a href="http://www.ensorparkandmuseum.org/">http://www.ensorparkandmuseum.org/</a>
Wichita NWS SKYWARN	<a href="http://ict-skywarn.org">http://ict-skywarn.org</a>
Kansas ARES Pages	<a href="http://ksarri.org/ares">http://ksarri.org/ares</a>
Wheat State Wireless Association	<a href="https://www.facebook.com/groups/WS0WA/">https://www.facebook.com/groups/WS0WA/</a>
Sand Hills Amateur Radio Club, Inc	<a href="http://www.SandhillsARC.com">http://www.SandhillsARC.com</a>
Jarbalo Amateur Radio Association	<a href="http://jara.signaleer.us">http://jara.signaleer.us</a>

# ARRL Midwest Director Roderick K. Blocksome KØDAS

The ARRL Midwest Division August 2017 Newsletter is now available on the Division's Web page. Here's the direct link:

<http://www.arrlmidwest.org/newsletter/newsletter.pdf>

This link always takes you to the current month's newsletter. If this month's newsletter doesn't open, try refreshing the page or clearing your browser's cache, in case your browser is loading a copy of a previous newsletter. Previous newsletters are available at: <http://www.arrlmidwest.org/newsletter.html>

Highlights this month are:

"Call To Action" FCC Amateur Radio Enforcement  
ARRL Annual Board of Directors Meeting Synopsis  
The ARRL International Grid Chase  
Greetings Midwest Division from Southwest Missouri  
Operating in the CQ 160 Meter CW Contest  
Midwest Division ARRL Hamfests & Conventions  
Midwest Division Special Event Stations

Thanks and 73's,  
ARRL Midwest Division Director:  
Roderick K Blocksome, KØDAS  
[k0das@arrl.org](mailto:k0das@arrl.org)



Supporting Our Veterans - Honorably Discharged  
[S\\*M\\*A\\*R\\*T - Special Military Active Retired Travel Club](#)

*KCONDG Sherwin  
or SARG; EX-K102 1960 to 1987  
or TOP, 1SG ; Army USAR, Retired 1951 to 1987 --- final discharge 1994*

God Bless those who have served this great country AMERICA  
Proud Military Veteran

SEEING THE COUNTRY WE DEFEND

SHERWIN & DOROTHY STIELOW



# ARES – Amateur Radio Emergency Service



Complete list of ECs and a printable State ARES map <http://ksarri.org/ares/>

<http://ksarri.org/ares/alphaks.php/>

<http://ksarri.org/distks.php>

## AMATEUR RADIO EMERGENCY SERVICE

### MONTHLY EC REPORT

#### ◆ Zone 4A – Brian KCØBS

JANUARY 2018 MONTHLY ARES REPORT TO DEC & SEC

Total of ACTIVE ARES members: 150 +0

Local Net Name: Johnson County ARES

Emergency Coordinator = Brian Short KC0BS 913-638-7373

Alternate Emergency Coordinator, Recruiting = Jim Andera K0NK 913-884-6613

Assistant Emergency Coordinators:

Herb Fiddick - ECS Liaison

George McCarville WB0CNK - Training, Drills

Matt May KC4WCG - IDs, MECC

Bill Gery KA2FNK - Recruiting, Technology

Darren Martin N0MZW - Net Manager

Brad Kelsey KU0FAN - Membership

Jesse Gonzalez KE0ECS - CERT

Chuck Simpson KC0NUG - Rapid Response

Jim Andera K0NK - KCHEART

NTS liaison is maintained with the KS SSB Net:

Jim Andera K0NK

Terry Reim WA0DTH

George McCarville WB0CNK

Jim Cordill K10BK

Debbie Britain AB0UY

Rich Britain N0ENO

Wretha Galeener KC0HHO

Net Sessions: 49

QNI: 342

QTC: 0

5 nets = 2 Meter Voice

5 nets = 2 Meter SATERN Voice

5 nets = CW

5 nets = 6 Meter

5 nets = 2 Meter Voice Simplex

5 nets = PSK 31 SATERN

5 nets = APRS Packet

4 nets = 70CM

5 nets = 1.25 Meter

5 nets = SATERN 80 meter SSB

Report prepared by:  
Darren Martin N0MZW  
Johnson County Kansas

◆ **Zone 6E – Rod K0EQH**

Kansas Area 6A, E & G ARES Net Report January 2018

Total Nets.....5  
Total QNI.....27  
Total QTC.....1 (net report)

Stations participating: N0OMC, N0KQX, N0OXQ, WB0QYA, KD0TWO, K0EQH

Alt NCS.....N0OMC

Rod  
K0EQH  
NCS

## **2018 Storm Fury On the Plains Spotter Talks**

Meteorologists from the Wichita NWS coordinate with the Emergency Managers in the 26 county warning area to prepare storm spotters and weather enthusiasts for the upcoming storm season. The storm identification training schedule is posted and all in the Wichita NWS county coverage area are encouraged to attend. <http://www.weather.gov/ict/spottertalks>

## **2018 Douglas County Severe Weather Symposium**

Registration is now OPEN for the 2018 Douglas County Severe Weather Symposium. Click here to visit our website and reserve your seat today!

<http://www.douglas-county.com/mycounty/emergency-management/symposium-2018.aspx>

Severe Weather Symposium

March 3, 2018

Doors open 7:30 am - all day

\$15 if paid by 5 pm on Feb. 12; \$20 after that

Double Tree by Hilton in Lawrence

More details are coming soon, so keep an eye on the Website:

<https://www.douglascountyks.org/severe-weather-symposium/about>

and Facebook page: <https://www.facebook.com/DCEMSevereWeatherSymposium>.

## **Weather 101 Lawrence Arts Center**

Weather 101  
March 28, 2018  
7 - 8:30 pm  
Free  
Lawrence Arts Center

## Silent Keys

### Matthew William Cox, KDØAMF

MULVANE- Matthew William Cox, 30, died January 11, 2018 Wichita, KS. Memorial Service 10 am January 24, 2018 at Jesus Christ of Latter Day Saints on 1409 S. Rock Road Derby, KS, Services will be followed by a reception, refreshments provided. Matthew is survived by wife, Karen Cox; sons, Valor and Ronan; mother, Charlotte Cox; brother, Curtis (Delena) Shelton; sisters, Jennifer Cox, Ashley (Tony) Cook and many more nieces and nephews.



Matthew Cox  
KDØAMF

<http://www.legacy.com/obituaries/kansas/obituary.aspx?page=lifestory&pid=187887435>

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### Samuel Melvin Gardner, WØOAG

Samuel Melvin Gardner, age 88, died on Saturday, January 20th, 2018 at the Clearfork Assisted Living Facility in Willow Park, Texas. He was born on June 30, 1929 in Amarillo, Texas, the son of Reynold and Melinda Bradley Gardner.

He was a member of the First Southern Baptist Church, the CAP, Sand Hills Amateur Radio Club. Sam also proudly served his country in the United States Air Force from 1947-1967. He worked for the National Weather Service until his retirement.

"Sam was known as "Old And Grouchy", a moniker he gave himself. Sam was an avid supporter of the Sand Hills Amateur Radio Club, the Civil Air Patrol and the Air Force Association." - Rod, KØEQH



In 1970 he moved from South Bend, Indiana to Garden City.

On April 4th, 1959, he married Eileen Mary Gardner in High Wycombe, England. She preceded him in death on September 23, 2014.

Survivors include: one son Richard Gardner of Denver, Co., two daughter-in-laws Susan K. Marshall of Denver, CO., LaQuita Gardner of Weatherford, TX., one sister Jean Desha of Mansfield, TX., four grand daughters Shannon Gardner of Springfield, OH., Nicole Gardner of Springfield, OH., Christy Templeton of Weatherford, TX., Mandy Nation of Pflugerville, TX and 8 great-grandchildren.

He was preceded in death by his parents; wife; brother, Reynold Gardner; son Samuel Melvin Gardner, Jr.

*"Sam" Gardner WØOAG* Funeral services will be held on Monday, January 29th, 2018, at 10:30 A.M. at the Price & Sons Funeral Home of Garden City. Friends are welcome to come to Time Out at 6pm after the service to have dinner and reminisce.

Visitation will be from 1-8 with the family present from 6:30-8:00 pm on Sunday, January 28th, 2018 at the funeral home.

Memorials may be made to the American Red Cross in care of Price & Sons Funeral Home, 620 N. Main St. Garden City, Kansas 67846.

Interment will take place at the Valley View Cemetery in Garden City, Kansas immediately following services.

<http://priceandsons.com/tribute/details/2000/Samuel-Gardner/obituary.html#content-start>

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## **Karen Hess, KCØKJL**

Hugoton, KS - Karen P. Hess, 76, died January 1, 2018 at Pioneer Manor in Hugoton.

She was born on December 12, 1941 in Hugoton, KS, the daughter of Raymond & Marjorie (Leakey) Floyd.

She attended Hugoton High School till her junior year, and then she graduated from Spearman High School in Spearman, TX in 1959. She then attended the Amarillo School of Cosmetology.

On April 13, 1966, she married John Hess in Muskogee, OK. He survives.

She attended the Lone Star Friends Church.

Survivors include: one son Jerry Miller, Guymon, OK, one daughter Karen Jo Miller Tyrone, OK; two step daughters, Cindy Hess Waxahachie, TX; Joannette Roybol and her husband Tony, Ennis, TX; one brother Scott Holmes, El Reno, OK; 6 grandchildren and 15 great grandchildren.

She was preceded in death by her parents.

Cremation has taken place, and a memorial service will be on Saturday, January 13, at 10:00 am at the Lone Star Friends Church, with Pastor Gary Dameron presiding.

Memorial Contributions may be sent to Operation Smile, in care of Brenneman Funeral Home, 1212 W. 2nd St., Liberal, KS 67901.

<http://www.brennemanfuneralhome.com/obituaries/Karen-Hess/#!/Obituary>

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## **Kevin J. Noah, KAØQVN**

Kansas City, KS - Kevin Joseph Noah passed away Dec. 31, 2017. Kevin was born May 1, 1958, in Kansas City, KS, one of three children born to Elwood and Ruth Noah. He married Rita Karen Simmons on Sept. 28, 1985. Kevin worked 40 years for Owens Corning Fiberglass. Kevin was preceded in death by his parents and brother, Bob Noah. He is survived by his wife Rita Noah, siser Theresa Noah, nieces Melanie French and Crystal Robinson, great nieces Ava French and Emily Robinson, as well as many other family and friends.

<http://www.legacy.com/obituaries/kansascity/obituary.aspx?pid=187843260>

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## **Neil (Seigel) Knight, WAØNUB**

Ottawa, KS - Neil (Seigel) Knight, 81, passed away Sunday, Feb. 4, 2018, at his home. He was born Oct. 29, 1936, in Garnett, Kansas, the son of Seigel Knight and Margaret Louise (Thompson) Knight-Lambert. He graduated from Garnett High School with the class of 1955. He then graduated from Pittsburg State University in 1959.



*Neil Knight, WAØNUB*

Funeral services will be 11 a.m. Thursday, Feb. 8, 2018, at Faith Lutheran Church, Ottawa, with burial to follow at 2 p.m. at Garnett Cemetery in Garnett, Kansas. A visitation will be from 6 p.m. to 8 p.m., Wednesday, Feb. 7, 2018, at Lamb-Roberts Funeral home, Ottawa.

Neil was a serviceman for Montgomery-Ward for several years working in many Kansas communities including Hutchinson, Larned, Wellington, and Coffeyville. In 1973 he moved to Ottawa and began his over 30-year career at King Radio, which eventually became Honeywell, as an avionics tech.

Neil was a member of Faith Lutheran Church, Ottawa. He was also a lifetime amateur radio operator. His call sign was WAØNUB. Neil could fix anything.

From a simple sewing machine to a television or car, Neil could take things apart and fix what was wrong with them. Probably what he spent the most time fixing and working on

was bicycles. He rode them all over town for many years. Neil loved bicycles and he spent many hours fixing them up. He loved World War II history. If there was a show on TV about the war, he wanted to watch it. When he was young he flew for more than 1,000 hours of flight time but never went on to get his license. Neil was a quiet, keep-to-himself gentleman. But he loved his family and his church.

On June 17, 1972, Neil was united in marriage to Yvonne Schiewe in Natrona, Kansas. They shared 45 years together. Yvonne survives of their home.

Neil was also survived by his son Neal Patrick Knight and his wife, Donna Diamond, of Princeton; daughter, Ginger Yvette Davis and her husband, Bryan Davis, of Ottawa; grandson, Devin Patrick Knight and his wife, Paige, of Ottawa; two granddaughters, Alexis Nicole Davis, Karley Joann Davis both of Ottawa; and three great-grandchildren, Zachary Knight, Mackenzie Knight, and Braelyn Knight.

He was preceded in death by his parents and a sister Elinor Louise Knight.

The family suggests memorials in his name to the Faith Lutheran Church or the American Diabetes Association, c/o Lamb-Roberts Funeral Home, P.O. Box 14, Ottawa, Kansas 66067. Condolences may be sent to the family through [www.lamb-roberts.com](http://www.lamb-roberts.com)

<http://www.ottawaherald.com/obituaries/20180205/seigel-neil-knight>

### **WØVFW VFW Post 3115 W5YI VE Tests**

WØVFW will host Amateur Radio TECHNICIAN classes in March 2018. This is to coincide with the start of the SKYWARN season. Please tell your interested friends.

Saturday March 17th (St. Patrick's Day) 9am to NOON- Lunch-1pm on- optional tutoring-meet & greet.

Saturday March 24th 9am to NOON- Lunch- 1pm on- optional tutoring -meet & greet.

Saturday March 31st (doors open 7:30am) VE Testing all classes- walk-in's welcome. ARRL \$15 fee

Use the south patio entrance (privacy fence door) in the parking lot (avoids canteen area)

Class Text book- W5YI Technician Study Manual Available at 1st class for \$20 or Radio Shack in Derby.

The 1pm afternoon optional tutoring -meet &greet is open to all; to welcome everyone to the Amateur Radio family. THERE IS NO FEE FOR THE CLASSES. (only textbook and exam) Reservations requested.

VFW Post 3115 Amateur Radio Club, WØVFW  
4801 West Douglas  
Wichita, KANSAS 67209

Reservations or questions – [w0vfw at yahoo dot com](mailto:w0vfw@yahoo.com)

### **Great Bend W5YI VE Tests**

Great Bend has been without an amateur radio club for some time. There is a W5YI CVE David Doonan, KIØNN, willing to do testing sessions on Saturdays.

Contact David at [d.doonan at ruraltel dot net](mailto:d.doonan@ruraltel.net) to set up a time for a Technician, General or Extra test session.



## Tom's Key Strokes - WØEAJ

Denver, Co. Displaced Kansas Neighbor  
and very gud friend!

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[daileyservices@centurylink.net](mailto:daileyservices@centurylink.net)



[http://www.qsl.net/jms/bio\\_rem/national.html](http://www.qsl.net/jms/bio_rem/national.html)

Interesting article on NATIONAL receivers and Jame Millen - Interesting but not mentioned, is the use by the British of the HRO series of receivers (especially, the HRO Senior) for the collaborative effort to break ENIGMA (ULTRA). I still enjoy my HRO-60T. It has all new capacitors AND all new RESISTORS as well.... All coilsets recalibrated and aligned (quite the PITA). Heck, in 58 it was \$600 with the speaker whew!

Tom

The following article was reconstructed by Larry Babcock from a talk given to the Niagara Frontier Wireless Association, (N.F.W.A.) by Ken Conrad in 1983. Kenny was a ardent collector and historian of the National Company prior to his death in the summer of 1988. The National information presented is all from Kenny. The information was preserved by Larry Babcock for this report.

Back in the 1930's the outstanding commerical radio equipment was made by the National Company in Malden, Mass. They had an assortment of sets. Most were for short wave work. They made the SW3, the SW4 and the SW5. The number in the model number was the number of tubes in the set. They were 3 to 5 tubes and all were regenerative. They all had one or two stages of R.F. amplification. The SW3 and SW4 had a single R.F. Stage.

In the early 1930's National also made the AGS which is highly sought by collectors these days. There were only a few ever made. Less accessories, and that means less coils, less power supply, less tubes, less speaker, less everything except the box listed for \$180.00. In those days that was a lot of money, more than 1/3 the cost of an automobile, so you see why very few were ever made and very few amateurs could ever buy one. Remember in 1932 and 1933 there weren't very many dollars around. Only a few affluent hams could buy an AGS.

Back in 1933 the state-of-the-art of short wave reception was very poor compared to nowadays. Most hams had home made two tube regenerative sets with a detector and one stage of audio. A few owned the National SW3 which also had an R.F. stage (plus regenerative detector and an audio stage). The most advanced amateur who has some cash (a few of them did but not me) spent up to \$100.00 for a Hammarlund Comet Pro. A lot of people remember this set but it was not very good.

It didn't have an R.F. stage. It had poor selectivity and a superhet was not suited for short wave reception in those days. A good regenerative set like the SW3 could run rings around a superhet with no problem at all! There was a real need for a good superhet like the AGS to be built.

In an article from CQ magazine written by James Millen of National it was stated that "It was in this chilly atmosphere that James Millen who was W1HRX and other engineers of the National Company commenced to design an advanced short wave superhet". The initial requirement came from the federal government.

The Bureau of Air Commerce which was the predecessor of the present Civil Aeronautics Authority was in the process of replacing the revolving light beacons used for air navigation with a comprehensive ground to air radio network. The communications system was divided into three groups. First, the ground transmitting equipment was to be developed and manufactured by G.E. The

airborne radio equipment developed and manufactured by Aircraft Radio Corporation who later developed the SCR 274N. The ground station receivers were designed and manufactured by National. The BAC and National signed a contract to produce several hundred AGS receivers to replace the antiquated sets in use at the time. Incidentally, AGS stands for Aviation Ground Station.

W1HRX started to work on the AGS design and became the leader of development. He didn't have much to go on. His previous experience was the old Browning Drake set of several years previous along with the SW3 and SW5 of National. The problems to get a good short wave set in those days were tremendous.

The first AGS receivers were made on a government contract with a few commercial sets also sold to affluent amateurs. The difference between the contracted ones and those sold on the open market was just in the name plate.

There were only between 200 and 400 sets sold to hams. That was very few even in those days and is why there aren't very many around today. The AGS was very shortly made obsolete by the HRO. (Actually the FB-7 superhet came shortly after the AGS, which was much more affordable and sold in comparatively good quantities. - JMS). The AGS used a new crystal filter just being developed. It was a single conversion superhet. It had one R.F. and two I.F. stages, an AVC, VFO and audio stages. The crystal filter was available if ordered special. With it the receiver was named the AGSX. Ken Conrad's AGS shown when it first gave this talk to the NFWA was the original type without the crystal filter.

The intermediate frequency was 500 KHz. There is no automatic volume control in this set. None at all. The volume was adjusted only by the bias control potentiometer for the R.F. and I.F. stages. AVC was applied to the first detector, a scheme frowned on today as the ever changing control voltage tends to pull the high frequency oscillator and causes strong signals to flutter but they got around this. In the AGS they injected the local oscillator signal into the plate circuit of the R.F. amplifier and inductively coupled the mixing signal into the first signal. That was how it was done.

Some aspects of the design were amazing. How to control the inductance and capacitance and make the tuned stages all track, that was a real job and to keep it right on the button! They figured that plug in coils were the way to go rather than having the coils permanently wired in. The AGS has five sets of three coils each and on the panel there is a chart which shows the frequency band covered by each set of coils.

This helped the operator pick out the ground station that he wanted to monitor. The tuning capacitors were hand measured. The tuning range and oscillator tracking were corrected by moving a tap on the wire connecting the tuning capacitor to the plug in coil. That was the final adjustment.

Using hand labor for calibration of course is impossible today because of the price of labor but in those days an engineer got a salary of \$20- to \$40- per week! Imagine that. Technicians earned from 20 to 35 cents an hour. This is why each AGS could be hand calibrated and the chart was right.

The chassis was made of heavy drawn 1/8" thick aluminum. The panel is very heavy steel firmly bolted to the chassis. This made a very rigid and absolutely tight assembly. The tuned frequency wouldn't change even if you dropped the set on the floor. The high frequency oscillator is in the middle of the unit and driven by a disk dial.

This receiver has a very unusual dial. It is the same as was later used on the HRO. The dial has five openings and is calibrated from zero to 500. Each time that the dial is turned passed one of the little openings, the scale is automatically changed. The number viewed through the hole jumps another fifty points! Each one of the line segment divisions that just cover a band. You can read to one tenth of a division directly and each division is equivalent to about 1 KHz so you can get down to 100 cycles direct reading. A heck of a lot of the receivers today don't even get near this. Imagine, this was over 50 years ago! The AGS was designed to work forever. You turn one on today and it will work immediately. Even if it has not been operated for fifty years that set will work!

The SW4 and SW5 both had plug in coils. Both were shown when Ken gave this talk to the NFWA.

Incidentally, before his death, Kenny donated his entire (large) collection of National receivers to the AWA and they are currently on display in the AWA museum. The SW3 was introduced by National in 1931. It was a low priced set. Because of its very light weight, it was adapted for use by the airlines.

At that time other aircraft receivers were heavy things and didn't perform to well. They had poor selectivity and were bothered by the planes ignition system.

Pan American was about to start flights to South America and needed a very light weight receiver. The only sets available at that time were the National SW4 and SW5. They were too big, too heavy and another problem was that coils would absorb moisture when flying over the ocean. This made the tuned frequency wander all over the place.

In about 1930 the old Boonton Rubber Company started making Bakelite coil form moldings for their sister company the Boonton Radio Company. The molding powder sold by the original Bakelite Corp. was based on the use of wood filler which was very hydroscopic.

Molding in those days was done with steam, not electric heat and as a consequence the molding rooms were extremely humid. The coils forms molded by this process varied tremendously in Q. Good and bad coils looked just alike. You couldn't tell a good coils by looking at it. To solve this problem the Boonton Rubber Co. changed from the old filler to ground mica and electrically heated presses. For the first time this method made uniform inductors. The new material was called R39 and was registered with this trademark. This new material was used in making the SW3 starting in the summer of 1931. During the long and useful life of the SW3 over 10,000 sets were made and used by everybody including Pan Am. It is still a good receiver today. The SW3 had tremendous range. You could get coils all the way from 9 to 2000 meters! The SW series sets are collectors items today and they are good ones. They are so stable that you can read sideband on them with no problem!

National used separate power supplies for many years because of the heating problem. With the power supply separate the heat from the transformer and rectifier didn't raise the temperature of the receiver and change the tuned frequency. With everything in the same box the temperature would not stabilize for along time and the frequency would drift until then. The power supply provided about 200 volts to the plates.

Manufacture of the SW3 continued for many years. The original had tubes with 2.5 volt filaments. Later they were made with 6 volt tubes and even with metal tubes before production finally folded.

The little National 110 (1-10) was also shown when Kenny gave his talk to the NFWA at the Buffalo, NY meeting. The #110 is a four tube super regenerative set. The tuned R.F. amplifier uses a very tiny type 954 tube. The detector was a type 955 in a self-quenching super regenerative circuit. It was transformer coupled to the first audi stage, a 6J5. The 6J5 was then resistance coupled to the 6V6 output stage. This was unusual. Kenny said that he didn't know the reason why national designed it this way rather than using transformer coupling for the added gain, but that was the way it was.

The model 110 had six separate pairs of small clear plastic coils. They are extremely small and so shaped that they can be picked up and plugged in very easily. If you picked them up by the coil itself it would probably collapse because they are so small and delicate. This set will get down to 300MHz. It tunes the one to ten meter band and it will get down to one meter. This was a long time ago too, way back in the fortys. (I liked the way Kenny said "down to 300 MHz" rather than up to 300 MHz. Here's a man who still thought in terms of wave length rather than frequency like us young guys!).

The model 110 had a separate A.C. power supply or could be operated with batteries. The manual didn't give the price but did have charts giving the frequency coverage for each set of plug in coils. It also had the same unusual tuning dial that was first used on the AGS.

The HRO is my favorite receiver. Some of the commercial airlines used the National AGS, but others wanted a little better receiver. They wanted one for CW that could also work with the new Western Electric phone transmitters (voice) that were about to be installed in aircraft.

Now consider the state of the art in 1933 and 1934. The great majority of hams had home made

regenerative sets or SW3's. A superhet was useless, they thought, for CW and pretty poor on general shortwave. It was considered a great thing to get anything on a short wave superhet so National started to develop the HRO. It was a coordinated effort. This receiver as developed on the east coast and the west coast of the U.S. at the same time! There was 3000 miles separating the mechanical and electrical teams! Wasn't that crazy? Wow. The west coast HRO team was coordinated by Herbert Hoover Jr.. James Millen was in charge of the east coast. They were in a hurry.

The tool makers required a job number for their overtime slips. Since none had been assigned, they took it upon themselves to use the initials "H" "O" "R", or "HOR" abbreviated from "Hell of a Rush!" since that was the state of affairs. Now known as the HOR the new prototype was carried by Millen to Pasadena for circuit revision. Bugs were worked out. It was a success. By this time however, some of the participants had doubts about the name. So they therefore renamed it the HRO. This change was made just in time to catch the first ad in December 1934 QST.

But I have digressed from my story. Getting back to the design, Herb Hoover, Jr. set up an experimental laboratory in his garage under the direction of Howard Morgan of Western Electric. Howard and his technicians went to work developing a circuit based on experience gained with the AGS and what the airlines were looking for. First the specifications were established. It had to have superior image rejection which called for two stages of R.F., not just one. The selectivity would require a crystal filter be included. Jim Millen had designed what they called a epicyclic dial so you could read to one part in five hundred. In other words the band spread on that dial was over 12 feet on a ham band!

The specifications for the HRO also required very good AVC and an S meter. The designers believed that plug in coils were the answer. They didn't want band switching and instead planned to have a new four bank plug in coil catacomb. Each coil deck had its own calibration chart. To reduce hum and heating effects the power supply was separate. As a whole, the receiver was years ahead of its time. It is one of the first examples of system designed equipment otherwise unknown before World War II.

The HRO was very outstanding, a classic. It had two R.F. stages, a crystal filter, two I.F. stages, AVC, BFO and 450 degrees band spread on any amateur band!

There was a system built into the catacombs. Each coil had two little screw holes with little machine screws in them. If you put the screw in to the hole on the left you get general coverage. When you remove the other one you get just the ham band over the whole dial. It was simple. The screws just shorted a condenser or opened one across part of the coil. But it worked and it gave tremendous band spread!

At first there was a lot of drift but in working on the problem they found out that most of the drift was in the oscillator tube and they were able to eliminate the problem. The HRO was so beautifully made that it would be impossible to build today. It would cost hundreds of dollars just to make the coil forms, the tuning condensers and the insulators. There was so much hand work in both the mechanical and electrical calibration.

One of the early owners of the HRO was Charlie Kolster. He was so impressed with the set that he suggested that Jim Millen replace his old two district call sign with a first district and have 1HRO in honor of the set. But the FCC goofed and he ended up with 1HRX (I believe that the "W" letter prefix was already in existance at this time so these calls should be preceded with that letter - JMS.) That was how the FCC did things. In spite of the call sign mix up, the set was an instant success.

Braniff Airlines bought a lot of HRO receivers. The set was so far ahead of time that they found it could be operated unattended. They installed a lot of HRO receivers on telephone poles spaced 50 miles apart. That way they could get the coverage to communicate with airplanes all along the route. At that time there was no radar, or beacons or anything. So they mounted HRO's in boxes on poles every 50 miles along the main route of the aircraft. These receivers ran continuously 24 hours a day! They were tuned to thirty one hundred and five kilocycles (KHz) which was the aircraft frequency.





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