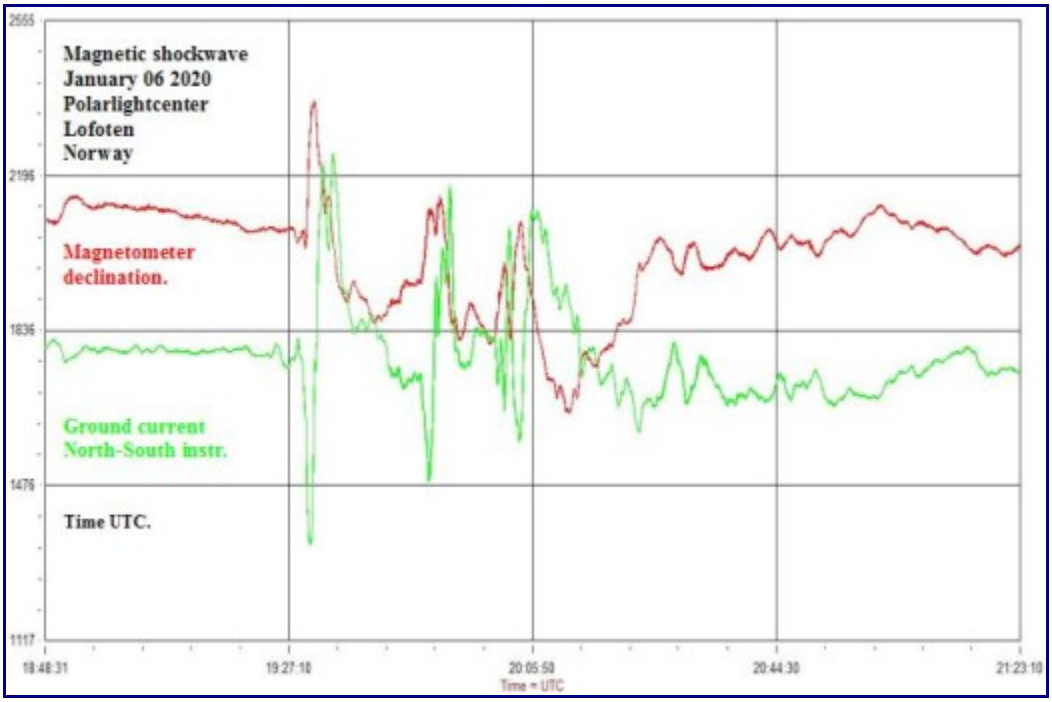
Kansas Amateur Radio
KAR News
kb0rwi@arrl.net http://ksarrl.org kb0rwi@arrl.net

January 2020 Newsletter

ELECTRICITY SURGES THROUGH THE SOIL OF NORWAY

On January 6th, something unexpected happened in the soil of northern Norway. "Electrical currents started flowing," reports Rob Stammes, who monitors ground currents at the Polarlightcenter geophysical observatory in Lofoten. This chart recording shows the sudden surge around 1930 UT:



"It seemed to be some kind of shockwave," says Stammes. "My instruments detected a sudden, strong variation in both ground currents and our local magnetic field. It really was a surprise."

NASA's ACE spacecraft detected something as well. About 15 minutes before the disturbance in Norway, the interplanetary magnetic field (IMF) near Earth abruptly swung around 180 degrees, and the solar wind density jumped more than 5-fold. Earth may have crossed through a fold in the heliospheric current sheet--a giant, wavy membrane of electrical current rippling through the solar system. Such crossings can cause these kind of effects.

While currents flowed through the ground, auroras filled the sky. Rayann Elzein photographed the corresponding outburst of lights from Utsjoki, Finland:

"What a surprise!" says Elzein. "The auroras were sudden and dynamic, with fast-moving green needles and several purple fringes!"

The auroras and ground currents were caused by the same thing: Rapidly changing magnetic fields. High above Earth's surface, magnetic vibrations shook loose energetic particles, which rained down on the upper atmosphere, creating auroras where they struck. Just below Earth's surface, magnetic vibrations caused currents to flow, triggering Rob Stammes' ground sensors.

"We couldn't see the auroras in northern Norway because of cloud cover," says Stammes, a little ruefully. "We had to be satisfied with the electricity underfoot."

Source: https://spaceweather.com/ Jan. 7, 2020

Sunspot number: 0 What is the sunspot number?	Updated 31 Dec 2019	
Spotless Days Current Stretch: 4 days 2019 total: 281 days (77%) 2018 total: 221 days (61%) 2017 total: 104 days (28%)	2016 total: 32 days (9%) 2015 total: 0 days (0%) 2014 total: 1 day (<1%) 2013 total: 0 days (0%) 2012 total: 0 days (0%) 2011 total: 2 days (<1%)	2010 total: 51 days (14%) 2009 total: 260 days (71%) 2008 total: 268 days (73%) 2007 total: 152 days (42%) 2006 total: 70 days (19%) Source: https://spaceweather.com

Links for Kansas Hams!

ARRL Main Page	http://www.arrl.org
ARRL KS Section News Page	http://www.arrl.org/Groups/view/kansas
ARRL Midwest Director's Newsletter	http://www.arrlmidwest.org/newsletter/newsletter.pdf
Kansas Section Pages and KAR's	https://ksarrl.org
W Mo-Kansas S. A. T. E. R. N.	http://www.salarmymokan.org
Kansas QSO Party	http://ksqsoparty.org
Wichita ARC	https://www.warc1.org
Ensor Museum	http://www.ensorparkandmuseum.org
K-Link Repeater Network	http://ks0lnk.net
Sand Hills Amateur Radio Club, Inc	http://www.SandhillsARC.com

Links to all known Kansas Clubs can be found at the bottom of https://ksarrl.org
If you change your Clubs web address, please contact Kent at kb0rwi@arrl.net

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

Salvation Army Team Emergency Radio Network

http://satern.ksarrl.org/

Net Reports courtesy of Richard, KØRCJ

Wichita Amateur Radio Club (WARC)
5 Sessions, QNI: 147, QTC: 4

WARC Fusion nets
5 Sessions, QNI: 39, QTC: 0

QCWA
4 Sessions, QNI: 31, QTC: 0

Reno County KS ARA (RCKARA)
3 Sessions, QNI: 33, QTC: 0

WARC DMR nets
5 Sessions, QNI: 44, QTC: 0

Great Salt Plains ARC (GSPARC)
5 Sessions, QNI: 55, QTC: 0

KS SSB and Phone Nets
49 Sessions, QNI: 504, QTC: 43

KØRCJ
PSHR: 1:40 2:40 3:30 4:0 5:0 6:30 TOTAL: 140

Supporting Our Veterans - Honorably Discharged
S*M*A*R*T - Special Military Active Retired Travel Club

KCONDG Sherwin
or SARG; EX-K102 1960 to l987
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

Silent Keys

As a service to fellow hams across the state, I urge all individuals and Clubs to send me Silent Key notices. Please include a link to an obituary. I watch Larry's List for announcements of hams from Kansas. If you are not on Larry's List, I will forward the notice to him. He in turn notifies the ARRL. As Larry cannot include pictures, I do my best to find images so that a face can be put with the name and call. Thank you!

Roland E. Barnaby, NØRAB


Roland E. Barnaby, NØRAB

Roland E. Barnaby, age 80, of Wichita, Kansas passed away on Friday January 10, 2020. Roland was born December 29, 1939. Roland was an avid fisherman. He competed in bass fishing tournaments and also fished for crappie. He was a fan of old (good) country music. Roland also had a ham radio under the callsign "NØRAB".

Roland is preceded in death by his parents, James and Doris Barnaby; son, Troy Barnaby; and brothers, Max, Steve, and Dale Barnaby.

Roland is survived by his wife, Lorna; son, Jason (Tina) Barnaby; daughter-in-law, Lora Shyrock; brother, Les Barnaby; sisters, Geneva Barnaby and Wannita Arnold; grandchildren, Joseph (Starla) Barnaby, Bethany (Alex) Tayler, Thomas Barnaby, and Mayece Barnaby; and great grandchild, Mason Edward Tayler.

A Memorial Service will be held on Thursday, January 16, 2020 at 1:00pm at Resthaven Mortuary.

https://www.dignitymemorial.com/obituaries/wichita-ks/roland-barnaby-8992956

Everything Should Be Made As Simple As Possible, But Not Simpler

By Dan Romanchik, KB6NU

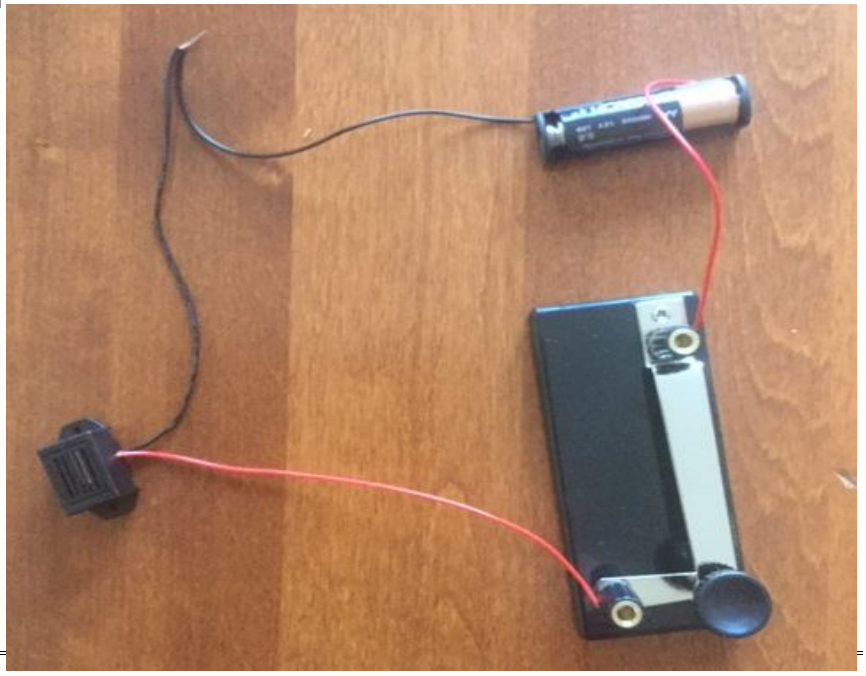
"Everything should be made as simple as possible, but not simpler" is a quote attributed to Albert Einstein (https://quotationcelebration.wordpress.com/2017/01/07/everything-should-be-made-as-simple-as-possible-but-not-simpler-albert-einstein/comment-page-1/). Here's one way to apply this principle in amateur radio, specifically to code practice oscillators.

A week ago, my friend, Paul emailed me:

"I am planning on teaching a two-hour introduction to Morse code to 14 girls ages 8 to 9 *[[Paul's grand-daughter is a Girl Scout.]]*. I plan on having the girls build a code practice device. I need your help in selecting a low cost buzzer and battery holder. Please take a look around and see would you can find. I would like to limit the power to one or two AA batteries."

I replied that I'd be happy to help him with the demonstration, and offered the following advice:

> "A while back, I built the QRPGuys' K7QO Code Practice Oscillator (https://qrpguys.com/k7qo-code-practice-oscillator). It uses a CR2032 coin battery.
>
> "Unfortunately, they don't sell it anymore, but the assembly manual is still online (https://qrpguys.com/wp-content/uploads/2017/03/cpo_assy_012616.pdf). The assembly manual doesn't call out specific parts, but here are some Amazon SKUs:
>
> - B00J4BK0NS, Black 3V Electromagnetic Type Piezo Buzzer, 20 pcs/$6.58
> - B06XF3K4NP, Coin Cell Button Battery Holder, 30 pcs/$9
> - B008SNZUYC, 3 Pin PCB Mount Female 3.5mm Stereo Jack, 10 pcs/$5.40
> - B071RMD6FD, 1/8" 3.5mm Stereo Male Connector, 10 pcs/$7
>
> "Batteries are available at the dollar store for about 30 cents each. So, you could do the whole thing for less than $5 for sure, even with a printed circuit board, which I would suggest that we do. Heck, if you ask nicely, the QRPGuys might even give us the artwork, or even better, have some boards still in stock. Even if they have neither, you should be able to get the boards in plenty of time."



Later that day, Paul replied:

Thanks, Dan, for the information and making yourself available to help. I am just going to use a buzzer, key, and battery. The buzzer has a frequency of 400 Hz.

And this morning, he sent me this photo, noting, "FYI. Also sounds great."

I think that this is as good an example of "Everything should be made as simple as possible, but not simpler" as there can be. I've volunteered to help Paul with his

class. That will be fun, too.

- https://www.xump.com/science/Buzzer-Leads15V.cfm
- https://www.xump.com/science/ContactKeySwitch.cfm
- https://www.xump.com/science/Single-AA-Battery-Holder.cfm

Join the Mail Notification List for KAR
If you would like to join the Mailchimp list to be notified of the new KAR Newsletter you may do so on the web site https://ksarrl.org by clicking on the Email Notification link. http://eepurl.com/c25Go9 Use of the e-mail and eepurl links above will provide the unique ID for your subscription.

KANSAS HF NETS
UPDATED November 6, 2019 11:19

Days	Time	Mgr	Freq	Net Name
M, W, F	6:45AM	KØRCJ	3920 KHz	Kansas Phone Net
Daily	7:00AM	WBØBWE	3920 KHz	Kansas AM Weather Net
Sat, Sun	8:00AM	KØRCJ	3920 KHz	Kansas Phone Net
Mon -Fri	12:30PM	KC5MP	7253.5 KHz	Central States Traffic Net
Daily	6:00PM	WBØBWE	3920 KHz	Kansas Weather Net
Daily	6:30PM	KØRCJ	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

I have posted public service nets on https://ksarrl.org/traffic.php

Western Kansas Net information courtesy Matt, KDØEZS

The western Kansas 160m net will be Tuesday nights at 9 pm central time on or near 1.960MHz LSB

ARES – Amateur Radio Emergency Service

Complete list of ECs and a printable State ARES map https://ksarrl.org/ares/

https://ksarrl.org/ares/alphaks.php/ https://ksarrl.org/ares/distks.php

AMATEUR RADIO EMERGENCY SERVICE

MONTHLY EC REPORT

◆ Zone 1B – Kevin KSØEGL

No Report this month

◆ Zone 4A – Brian KCØBS

DECEMBER 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 KI0BK
Debbie Britain AB0UY	Rich Britain N0ENO

Net Sessions: 35
QNI: 314
QTC: 0

3 nets - 2 Meter Voice
4 nets - 440 Voice
3 nets - 2 Meter SATERN Voice
4 nets – CW
3 nets - 6 Meter

3 nets - 2 Meter Voice Simplex
4 nets - PSK 31 SATERN
4 nets - APRS Packet
4 nets - 1.25 Meter
3 nets - SATERN 80 meter SSB

Reminder> Next meeting is January 13, and it will be our annual Gratitude meeting.

Report prepared by:
Darren Martin N0MZW
Johnson County Kansas

◆ Zone 6A, E & G – Rod KØEQH

Kansas ARES Zones 6A, E & G Net report for December 2019

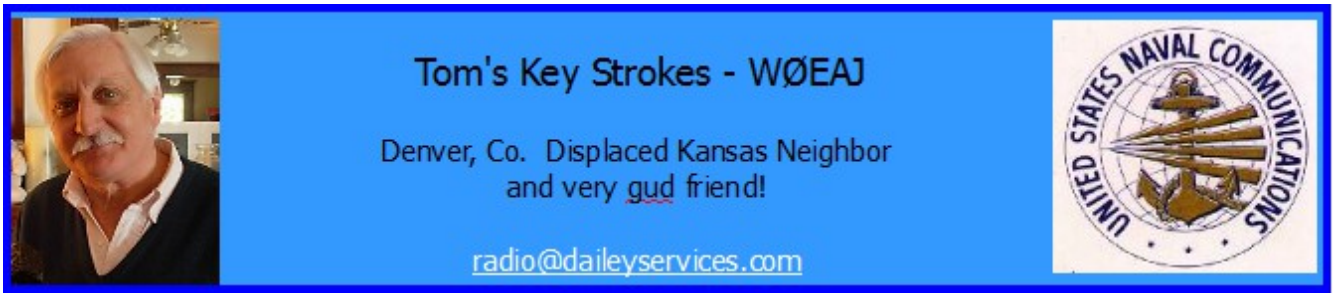
Total Nets.....3
Total QNI.....23

No nets held Dec 24, (Christmas eve) and Dec 31 (New Year's eve)

Stations participating: WB0QYA, KD0TWO, N0KQX, N0OXQ, K0EQH, N0OMC, KG0VA, W0BYV, AC0E

Rod
KØEQH
Finney, Grant, Gray, Greeley, Hamilton, Haskell,
Kearney, Lane, Scott, Stanton, Wichita Counties

The Sand Hills ARC held it's annual Christmas Dinner/Meeting the 14th at LaFiesta restaurant in Scott City. 11 members and guests had a nice dinner and good fellowship.



Making SWAN's Fly – Chapter 1

Okay, so this edition wasn't SUPPOSED to be about SWANs. I've let Kent down a few weeks and YOU as well, so figured I'd better get cracking and turn out yet another yarn.

Ahhh, you can almost smell the bakelite, hot resistors, waxy old caps, that curious scent of wire insulation,and burned-dirt on top of tubes. Yea, the SWANs we speak of here… no, not the kind that fly and are cranky on the ground (or lake), but the ones that came out of Oceanside, CA. are the stuff of legend. Yes, they do DRIFT a bit (birds do that, ya'know),and do NOT like UNMATCHED final tubes, but they sold THOUSANDS and put a lot of us on the air with a "modern" rig, back in the 60s and 70s, so here goes. Did you know that the same guy (Johnson) designed the SWAN, Cubic

ASTRO, and ATLAS radios? Actually, if you look at them, you'll see similarities.

Yep SWAN was even in the forefront of solid-state stuff. Owing to my incessant desire to find weird, unusual, and rare radios to find, I once was given a SWAN SS-200… ever heard of 'em? They made an SS-15, SS-100, and SS-200 version. They're all solid-state, have NO "tune up" as such, and have a tunable preselector, that like on Wadley Loop radios (like the Yaesu FRG-7 and Radio Shack DX-300), can be tuned to bands OTHER than what you've selected… what I mean, is that you get the bonus of being able to SWL a bit, even though the radio w asn't designed [necessarily] to operate out of the "Basic Five" ham bands. (80, 40, 20, 15, & 10).

SWAN SS-200A

When I got the SS-200, there were MANY small (No. 22) wires under the main board that had broken off… How in the world to figure out what-went-where? Ya'see, I didn't have a manual, and all my efforts to find out were for naught. Some were easy to determine, but others required a jeweler's loupe to match the pattern of broken strands on the bottom of each wire, with the broken-off stubs of the board pads. I think about that now, and am amazed at MYSELF for figuring that all out. At any rate, it took me about 3 weeks, but in spite of the CB'er who'd messed with the radio, trying to put it on 11m, I ultimately came down to TWO wires, and they looked EXACTLY the same…hmmm – I finally put the whole radio relatively back together and observed where those wires "wanted to be" – figuring I'd paid ZERO for the beast, I had nothing to lose, so hooked 'em up, and s-l-o-w-l-y gave it 12 vdc, and voila! I got noise. Touching the antenna terminal with a pencil brought power-line noise, and a piece-of-wire later, I heard Intercon on 14.300 – The radio required alignment – TYPICALLY, most radios do NOT require any alignment unless they've been screwed with, but of course, YES, this one had been.

SWAN Cygnet 500C

Assuming it was similar to all their later products (500, 500C, Cygnet, 500CX, 700CX… ATLASs), I figured out where the IF cans were by putting a loop on the end of a piece of RG-58, connected to a signal generator tuned around 5.5 mHz, and saw which ones were affected. Then simply tapped my AC VTVM (yes, there's nothing like a swinging needle for tuning stuff up) onto the AGC (automatic gain control) like and peaked for best signal… the radio veritably came to LIFE and trying the transmitter, it worked swell… about 200 PEP and about 150w carrier for CW.

Ultimately, I sold the radio to a SWAN collector in California, and yeah… I'm kinda sorry I did that, but oh well – there's always another Hamfest.

… and there was.

Some years ago, my Stepdad – Jim Carl WØKI sk – took me over to his buddy's house… Norm Wilson WØRAS sk. Norm lived not far from Jim in Prairie Village, and they'd been ham radio budds' for some time. Poor ol' Norm had finally succumbed to The curse of Alzeheimer's and passed… His XYL offered all his stuff to Jim, but Jim didn't want it, so suggested his wife give it all to me (Jim knew a good "scrapper")… among the stuff was a SWAN 350 with matching Power Supply & Speaker. I'd owned a SWAN 500C from early 1972 to late 1986, and had worked more DX with that stilly thing, than with any other adio… before or SINCE!

I filled (and I do mean FILLED) the '94 Toyota PU (camper shell over the bed) with radio stuff, and headed back to Colorado. I must admit that the lonesome SWAN sat neglected for a few years, until I decided to "make it fly" again. First job was to RECAP the entire power supply, as the electrolytics were "oozing" a tad, and those original filter caps begin to get [electrically] leaky and can sometimes even DEAD SHORT… yeah, us OMs know you don't just plug some old radio in and turn it on – that's why Variacs were invented. Anyway, I obtained a large handful f the proper caps from MOUSER and put them all into the 117XC power supply, along with replacing the diodes – they weren't bad, but – "as long as you're in there"…

Now for the radio – As it turned out, all but 1 of the tubes were GREAT (the audio output one was weak), BUT… Oh Lordy… Norm, in some stage of his debilitating disease, had decided that the radio needed to be "REALIGNED', so he twisted and turned EVERY SLUG IN EVERY COIL and turned EVERY TRIMMER CAP in that whole doggone box. It took me THREE times to properly align it, and the worst was the heterodyne oscillator (basically explained - makes you transmit on the SAME frequency that you're listening to). See the SWAN folks just put this little note in the manual that sorta says "Factory Aligned – do not attempt to adjust or tamper with in any way!" – oh just great…$@%##*^!!!!

Some years ago I'd redone a Heathkit SSB monobander and it was the same warning, so by trial-and-error, I managed to zero it… so did the same and got the SWAN zeroed too.

I've since put it on the No Name Vintage Sideband Net – 3977 kHz on Saturday mornings, about 0800 Central Time (Net control is out of Des Moines, IA) with great reports from the radio, the SAME D-104 I got with my SWAN 500C in '72, and going through my center-fed Zepp fed with ladder line (through a Heath SA-2060 matchbox). I gotta admit – putting Norm's radio on the air gave me INTENSE satisfaction, as I'd told his wife "As long as I use Norm's radio, his voice will live on… and it'll make Jim smile too" – she liked that.

And THAT, noble readers, is why I fix old radios that glow in the dark – they light up the world in ways you may have NEVER imagined.

Dit dit