



Ham Hum

July 10, 2020 Volume MCMXLV, Issue 7

AKSARBEN ARC Club Meeting – June 12, 2020

The meeting was called to order at 7:04 PM by roll call on the repeater and introductions on Zoom. There were 26 attendees.

Officers and Board members present included: Sean, AD0QG; Dan, N0POT; Dave, N0JSB; Brian, KE0GKB; Rea, N0REA

Secretary's Report - Brian, KE0GKB – The minutes were posted in the Ham Hum.

Treasurer's Report - Dave, N0JSB – As of May 31 the club accounts had balances of: Main Checking \$4,489.05, Repeater Checking \$432.45 Savings \$6,992.16, CD Life Member one \$6,484.77, CD Life Member two \$6,736.18, and CD Repeater \$1,122.22 This leaves the balance of all the club accounts at \$26,246.83.

In the month of May there were deposits of \$31.67 consisting of \$20.00 from membership dues, and \$11.67 from Amazon Smile.

There were no May Monthly expenses.

President's Report - Sean, AD0QG – There is the possibility that the club will be able to meet in person again in July at the Boys Town hospital, once this is confirmed we will let the club know.

We are asking the membership if we should have Flea Esta this year. The final decision will be made at the July meeting but please email the board if you have any thoughts or ideas

Vice President's Report — Pat, W0OJU No report

Disaster Preparedness:

SATERN – Mary, N0TRK – No report

Education Committee – Rea N0REA- We are unable to get spaces to have classes, but Rea is willing to work with people one on one if they have any questions. You can contact him at education@aksarbenarc.org.

There is a testing session at the Red Cross in Council Bluffs on June 30, 2020, there is a wait list of people wanting to test. This is the last testing session for the current Amateur Extra exam, the new question pool goes into effect on July 1, 2020.

Membership Committee - Mary, N0TRK Two new members were presented to the club.

Thomas Blocher KE0ULW with a general class license and

Robert Mitchell KE0ZUP, a General class license.

After asking for no votes there were no negative votes and in most online meetings that have time limits if there are no dissenting votes the motion carries. The decision was not presented on the meeting until it was verified that we had 10% of the members present to make this an official meeting.

Web Services - Mary, N0TRK/Adam, KDOMMG –The website is working

Repeater – John- WBOCMC After some testing it was determined that only about fifteen watts were getting up to the antenna on the 94 repeater, it is suspected that the loss of power was happening in the duplexer.

Field Day – Adam, KDOMMG – There was a brief discussion on a doing a virtual field day by operating from your backyard using emergency power. There was also a discussion the new rules for operating from your home station.

Courtesy Committee – Bill Snyder KDOFJR – No cards were sent out.

Flea-Esta – it was decided that the final decision on having Flea Esta would be made at the July meeting. It was asked that the members send their opinions to board@aksarbenarc.org.

The Zoom meeting abruptly ended at 7:35 PM when the time limit for the free version of Zoom Expired.

Area Nets

Monday

7:00 PM 145.290 South-West Iowa ARES Glenwood, IA.

8:00 PM 144.250 NE Missouri SWOT.

9:00 PM 146.940 AARC Chat Net. Ak-Sar-Ben ARC Omaha, NE.

Tuesday

9:00 PM 145.310 Washington Co. ARES Washington Co, NE.

Wednesday

7:00 PM 146.670 Dodge Co. ARES Dodge Co, NE.

7:30 PM 7.122 CW Four State QRP Comfortable Net.

8:00 PM 3.564 CW Four State QRP Comfortable Net.

8:00 PM 145.310 Saunders Co. ARES Saunders Co, NE.

8:30 PM 7.122 CW Four State QRP Comfortable Net.

9:00 PM 3.580.5 PSK Four State QRP Comfortable Net.

9:00 PM 146.820 Pottawattamie County ARES Council Bluffs, IA.

Thursday

8:30 AM 7.122 CW Four State QRP 40M Morning Net.

7:30 PM 145.310- Lincoln/Omaha SATERN Net. Ashland, NE.

8:00 PM 28.350 SSB 10-Meter Net.

8:00 PM 144.250 2-Meter SSB Net.

8:00 PM 147.360 Heartland DX Association.

Friday

10:00 PM 224.760- Tone 146.2 Promote the Band Net

Saturday

12:00 PM 146.82 Swap Net Council Bluffs, IA.

8:30 PM 3.921.000 QCWA Chapter 20.

Sunday

8:00 AM 3.902.500 Swap Net.

8:30 AM 3.897.500 3900 Club.

8:30 PM 443.925+ (103.5 tone) IRLP Net.

2:00 PM 50.200 6 Meter Net

9:00 PM 146.940- Douglas Co. ARES net, KØUSA repeater.

From John—WB0CMC A Cheap way to do crystals if you need to.

Recently I have been doing some research on some PXOs (programmable crystal oscillators) with a few other hams around the country. It started with a search for replacement Xtals for some older PC electronics ATV transmitters. There are a number of manufacturers that make them and all but one were not very satisfactory for use in those transmitters, mostly due to noise sidebands (phase noise). I finally found one that was very nearly the same as a crystal in spectral purity. Silicon Labs specified sideband noise at about -85 dBC @ 100 Hz. When incorporated into the PC transmitter the output was identical for both. If someone wants to add or re-crystal any older equipment it is now possible for about \$5/crystal +shipping. I have an old Kenwood TR 8300, 23 channel 10 Watt transceiver that only had 5 channels in it. 2 of the RX xtals had quit but the TX were still OK. I ordered 2 replacements for the RX and 3 more complete channels for some of the local repeaters. All the RX were within 200 Hz of where they were ordered. So were the TX. TX below, left. CH 6, 7 & 8 color coded leads.

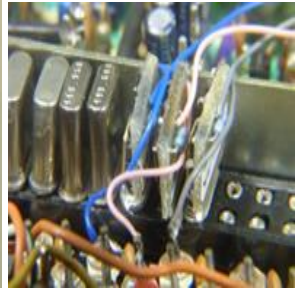




RX Module w/ PXO



TX Module w/ no PXO



3 new PXOs Ch 6, 7, & 8

One caveat: none of these can be tweaked or direct frequency modulated. Most of the multi-channel transmitters used phase modulation which this one is and they work very well. I did discover that the capacitor that normally sets the crystal frequency did make a difference on audio distortion. Properly set they did minimize distortion to very nearly that of the original crystals. The caps on the RX did absolutely nothing. (how to frustrate a diddler with a screw driver) Now that I have satisfied my curiosity I don't know what I'm going to do with the radio. For about \$10 per channel it's cheaper than the original cost/channel. PXOs that really work well are available from Digikey, P# 510CCA AAAG-ND. Enter the desired frequency when you order each one. Shipping would cost the same whether you order 1 or 20. Make sure you get the right frequency range for your use. The first C in the part number indicates 3.3volt, CMOS. The second C is 20ppm, a B would be 25 ppm and an A would be 50 ppm. The third A is OE active high, a B would be active low. The first A in the suffix indicates greater than 6 digit resolution. The second A is the size; A=5X7mm, B=3.2X5mm and C=2.5X3.2mm, really tiny. The third A is revision, The G is temp range. These do seem to be stable over temperature changes.

In summary, these would be good substitutes for real crystals needing only a 3.3 volt supply and a mount with pins for the socket. (18 ga solid Cu.)

Field Day 2020 - A Time to Adapt

Field Day 2020 was different. But thanks to the ARRL a lot of people were participated that had not participated in a long time. If one of those was you, as a member of the AK-SAR-BEN ARC you can add your score to that of the club. Instructions on how to do this are on aksarbenarc.org but if you still need help, email fieldday@aksarbenarc and they can help you through the process.

If you haven't already uploaded your logs to the ARRL (the ARRL due date is 7/28) THEN... make sure you send the Cabrillo file to the AARC Field Day competition. This link is also on the AARC website. The AARC Deadline is 07/15/2020

There will be a random drawing for a \$50 gift card to any AARC member who made at least 1 contact = AND uploads the their logs to the ARRL putting AK SAR BEN ARC as your club! And of course sends those same logs to AARC. There will be certificates for several different categories.

We will have more details in August! In the meantime -- get those logs uploaded!

Mary—NOTRK



WWW.ARRL.ORG

Talking about Sunspots

The sunspots may well be harbingers of the Sun's solar cycle ramping up and becoming more active. Or, they may not. It will be a few more months before we know for sure. ... As the Sun moves through its natural 11-year cycle, in which its activity rises and falls, sunspots rise and fall in number, too.

As the Sun moves through its natural 11-year cycle, in which its activity rises and falls, sunspots rise and fall in number, too. NASA and NOAA track sunspots in order to determine, and predict, the progress of the solar cycle — and ultimately, solar activity. Currently, scientists are paying close attention to the sunspot number as it's key to determining the dates of solar minimum, which is the official start of Solar Cycle 25. This new sunspot activity could be a sign that the Sun is possibly revving up to the new cycle and has passed through minimum.

However, it takes at least six months of solar observations and sunspot-counting after a minimum to know when it's occurred. Because that minimum is defined by the lowest number of sunspots in a cycle, scientists need to see the numbers consistently rising before they can determine when exactly they were at the bottom. That means solar minimum is an instance only recognizable in hindsight: It could take six to 12 months after the fact to confirm when minimum has actually passed.

This is partly because our star is extremely variable. Just because the sunspot numbers go up or down in a given month doesn't mean it won't reverse course the next month, only to go back again the month after that. So, scientists need long-term data to build a picture of the Sun's overall trends through the solar cycle. Commonly, that means the number we use to compare any given month is the average sunspot number from six months both backward and forward in time — meaning that right now, we can confidently characterize what October 2019 looks like compared to the months before it (there were definitely fewer sunspots!), but not yet what November looks like compared to that.

***By Karen Fox, Lina Tran
NASA's Goddard Space Flight Center, Greenbelt, Md.***

Club Officers & Board Members

President	Sean Edwards	ADØQG	president@aksarbenarc.org
Vice President	Pat Connell	WØOUJ	vicepresident@aksarbenarc.org
2018 Secretary	Brian Sohl	KEØGKB	secretary@aksarbenarc.org
2018 Treasurer	Dave Rice	NØJSB	treasurer@aksarbenarc.org
2019-2021 Director	Dave Rice	NØJSB	board@aksarbenarc.org
2019-2021 Director	Dan Buchholz	NØPOT	board@aksarbenarc.org
2018-2019 Director	Brian Sohl	KEØGKB	board@aksarbenarc.org
2018-2019 Director	Ray Blackburn	NØREA	board@aksarbenarc.org
Immediate Past President	Kevin Hill	KAØVNY	board@aksarbenarc.org

Club Committees

Courtesy Committee	Bill Snyder	KDØFJR	courtesy@aksarbenarc.org
Education	Ray Blackburn	NØREA	education@aksarbenarc.org
Field Day	Adam Kavan	KDØMMG	fieldday@aksarbenarc.org
Flea-Esta	Chris Rice		flea@aksarbenarc.org
Membership	Mary Joseph	NØTRK	membership@aksarbenarc.org
Monday Night .94 Net	Rich Swig	WAØZQG	wa0zqg@hotmail.com
P.I.M.P.	Jim Westcott	KAØKCV	pr@aksarbenarc.org
Prizes	Open	Open	prizes@aksarbenarc.org
A.R.E.S.	Steve Schmitz	NØUP	n0up@arrl.net
Publications	Brian Pitchanau	WEØBEP	hamhum@aksarbenarc.org
QSL Manager & Technical	Ed Edwards	KØIL	qslmanager@aksarbenarc.org
Special Events Coordinator	Pat Joseph	KØCTU	community_service@aksarbenarc.org

Technical Assistance	Ed Edwards	KØIL	technical@aksarbenarc.org
Web Services	Mary Joseph	NØTRK	web_master@aksarbenarc.org

Repeater Committee

Chairman	John Gebuhr	WBØCMC	repeater@aksarbenarc.org
Vice Chairman	Steve Schmitz	NØUP	repeater@aksarbenarc.org
Control Operator	Mary Joseph	NØTRK	repeater@aksarbenarc.org
Club Call sign Trustee	Corby Krick	KØSKW	trustee@aksarbenarc.org
Member	Russ Hilton	ADØQH	repeater@aksarbenarc.org

Other Contacts

ARRL Midwest Director	Rod Blocksome	KØDAS	k0das@arrl.org
ARRL Midwest Vice-Dir.	Art Zygielbaum	KØAIZ	k0aiz@arrl.org
EC Douglas County	Steve Schmitz	NØUP	dcares@aksarbenarc.org
EC Sarpy County	Dennis Mitchell	KCØYKN	
Exams/Vol. Council	Brian Zdan	KMØY	testing@aksarbenarc.org
NE Section Manager	Matt Anderson	KAØBOJ	ka0boj@arrl.org

AARC Ham Hum Post Office Box 24551, Omaha, NE 68124-0551