

THE eQRM

MARCH 2021



The BVARA in Beaver County Pennsylvania

Beaver Valley Amateur Radio Association

W3SGJ

Repeater 145.310 PL 131.8

On the Cover: This display of the Aurora Borealis is magnificent light playing off particles distributed by sunspot activity. Every 11 years, the sun reaches Solar Maximum. It can produce nighttime lights as far south as Presque Isle in northern Pennsylvania. This is Cherry Springs State Park in North Central Pennsylvania, with the darkest night skies in the Northeast.

Photo by Ms. English.

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Check into our nets

Wednesday 2 Meter

8:30PM on 145.310 MHz PL 131.8

Wednesday 10 Meter

9:00PM on 28.470 MHz

The eQRM is a publication of the Beaver Valley Amateur Radio Association (BVARA) and is Copyright 2010 - 2021. All material presented in this publication is not necessarily the views of the American Radio Relay League (ARRL), BVARA, or members of the said organizations. If you would like to contact the editor of the eQRM, please email David at kc3bxc.73@gmail.com. Please visit us online at www.W3SGJ.org. To subscribe to our newsletter, please visit W3SGJ.org/newsletter.php

Who We Are

2020 BVARA OFFICERS

President: Jack Spencer, KZ3Z

Vice President: Dan Grazulis, KB3VSP

2nd Vice Pres.: Doug Hanna, N4YKQ

Treasurer: Pam Spencer, W3PMS

Secretary: Norm Trunick, K3NJT

Director: Tony Pavilonis, K3AHP

Director: Bob Winkle, N3AZZ

Trustee: Doug Hanna, N4YKQ

MONTHLY MEETINGS

E-Board meetings are now held the Saturday before the monthly club meeting.

VE testing begins at 5:00 PM.

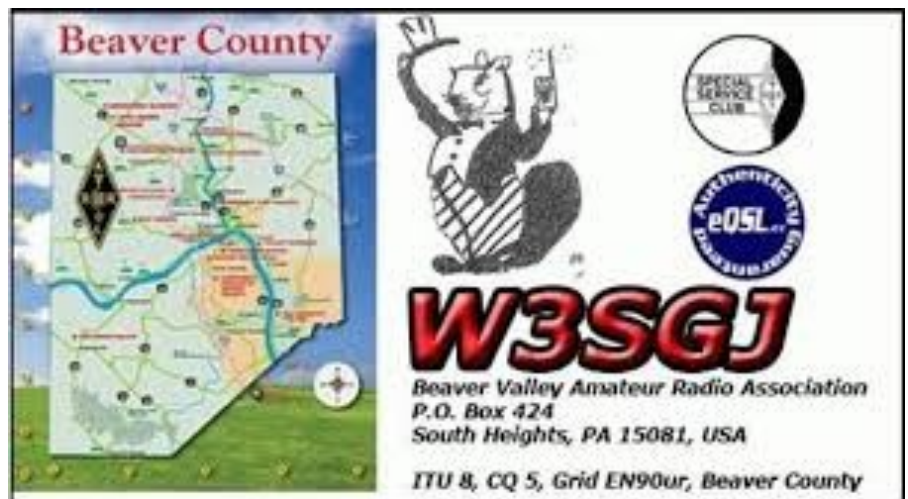
Regular meetings are at 6:30 PM

All meetings are held at the
Beaver County
Emergency Services Center
351 14th Street
Ambridge, PA 15003
on the second Thursday of every month
(unless otherwise stated).

*All meetings subject to Covid
restrictions and cancellations.*

Club Meetings 2021

Mar 11
Apr 08
May 13
Jun 10
Jul 08
Aug 12
Sep 09
Oct 14
Nov 11
Dec 09



This Month

This Month:



Speaker:

Rich Soltesz
K3SOM

Topic:

History of DXpeditions

Including:

Continuing with our BVARA Presentation Series, our topic is one that has a world-wide following and a history dating back to the 1920s – the DXpedition. Today, a DXpedition is considered to be an exotic place by amateur radio operators, perhaps because of its remoteness, access restrictions or simply because there are very few radio amateurs active from that place. We'll first look at how these 'expeditions' began, then recall some memorable ones to the North and South Poles, Thor Heyerdahl's 1947 Kon-Tiki trip and the 1948 'Expedition Gon-Waki' to the Bahamas by Bob Denniston. Then we'll look at the rules for how a place becomes a DXCC candidate.

But wait, there's more! We'll look at the dangers brought about by the location, the climate, and other threats to our survival under extreme conditions and the teamwork required to pull it off. Consider the intense logistics preparation, the propagation forecasting, equipment and antenna selections, power, internet communications requirements, medical, food and water need, just to mention more pertinent issues. Be sure to bring along your Passport and sea sickness medications because this is one exciting presentation you won't want to miss!



Rich's Background:

Extra Class Ham, Licensed since 1962,
VE,
B.S. Electrical Engineering



DXA=

Select Map

Toggle Data

Refreshes in 20

☐ Pause

Donate

Order QSLs

Order Souvenirs

Contact Us

Privacy Policy

About DXA

VKOEK HEARD ISLAND

23 Mar - 10 Apr 2016

Last packet uploaded at: 02:12

Just Logged

K3SOM

NOLAN

Worked

W2RU

W4CB

N6BQ

N6DV

2016-04-06 15:13:16Z: Good evening from Heard Island! We have stations running on 40 and 20 m CW and 30 RTTY. Weather this evening is cloudy, the temperature is 7 C (45 F), pressure is 1012 mbar, with strong and gusty northerly winds.

QSOs logged in last minute 0

QSO SEARCH	CONFIRM LOGGED	CURRENTLY WORKING	TIME REMAINING	TOTAL QSOs
<div>Please enter...</div> <div> <input type="text"/> </div> <div>...a valid call sign</div>	<div>160 80 40 30 20 17 15 12 10 6</div> <div> <div>CW</div> <div>SSB</div> <div>DIGI</div> </div>	<div>160 80 40 30 20 17 15 12 10 6</div> <div> <div>CW</div> <div>SSB</div> <div>DIGI</div> </div>	<div>3d 13h 45m</div> <div>Thu, 07 Apr 2016</div> <div>02:14:28 UTC</div>	<div>63937</div> <div> <div>CW</div> <div>SSB</div> <div>DIGI</div> </div> <div>47790 14195 1949</div>

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THE eQRM

More this Month

Weekly

The Freedom Square Diner in Monaca has a great wait staff. Come let them take your order.

Thursday Morning Breakfast (or you can have lunch)

As the Governor permits restaurants to function we will be there if the Diner is open.



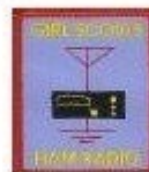
The BVARA meets every Thursday at the Freedom Square Diner in Center Township, just to the right of the Cinemark Center Township Marketplace at 09:30 AM. All radio amateurs and those interested in amateur radio are encouraged to come join us at our Thursday morning breakfast.

See you Thursday at



RACES / ARES

The eQRM Urges All County Hams to Participate.



Get your License or Upgrade

If you are interested in getting your first FCC license or upgrading your current amateur radio license, the Beaver Valley Amateur Radio Association holds VE Test sessions (Volunteer Examinations) the second Thursday of each month at the Beaver County Emergency Services Center in Ambridge Pennsylvania prior to our BVARA Club meeting. If there is no meeting there is no test session. Please come take your test with us!

For more information, contact :
Rich Soltesz, K3SOM
(724) 847-0610
k3som@arrl.net



VE TEST SESSIONS

Beaver County Emergency Services Center 351 14th Street Ambridge, PA 15003.
Tests begin promptly at 5 pm on the same day as BVARA Club Meetings
(the second Thursday of the month).
All classes of amateur radio license tests are administered.



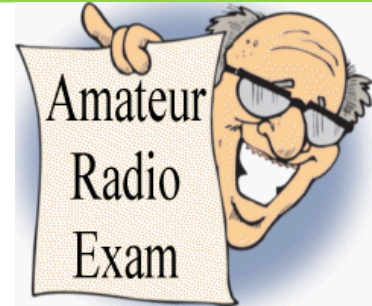
ALL candidates MUST bring ALL of the following:

1. 2 forms of I.D. - one MUST be a photo I.D.
2. A pencil AND a pen with blue or black ink.
3. The original AND a photocopy of any valid ham license.
4. The original AND a photocopy of any C.S.C.E.
5. The test fee of \$15 - cash, check, or money order.

New License and Upgrades

BVARA VE Testing

Testing this month :



February 2021 VE Test Session Results :

Our February VE Test Session had four candidates, with each participant achieving their goal of passing the exam.

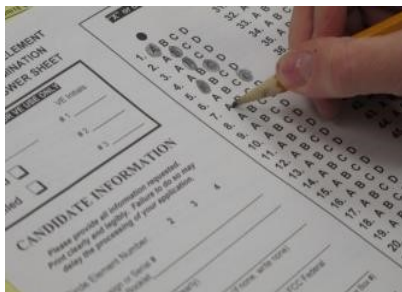
Because of the restrictions that were caused by the corona virus, our testing was not able to be conducted at our normal location at the Beaver County Emergency Services Center in Ambridge, PA. We were able to secure an indoor location that was very suitable for our VE testing purposes.

Congratulations to:

- Eric Rauscher – KC3RGD, McMurray, PA, Technician
- Darryl Boren – KC3RGE, Kennerdell, PA, Technician
- David Whalen – KC3PGL, Cranberry Township, PA, General
- John Homich, Jr. – KC3QCG, Freedom, PA, General

All of this testing would not be possible without the help of the following Extra-Class VE Team members:

Reg Genola – W3REG,
Tony Pavilonis - K3AHP,
Bart Stack - KB3NFM, and
Bob Winkle - N3AZZ



Thank you and 73 from:
Rich Soltesz - K3SOM, VE Liaison



Membership Information

By becoming a BVARA member you help secure the future of Amateur Radio in Beaver County. Additionally, the BVARA receives a portion of each ARRL membership you purchase!

Join the BVARA and ARRL

Sign up for:	Price	
<input type="radio"/> BVARA full membership	25.00	_____
<input type="radio"/> BVARA student membership	15.00	_____
<input type="radio"/> BVARA associate membership	10.00	_____
<input type="radio"/> BVARA Child under 21 at home membership	5.00	_____
One year ARRL membership	49.00	_____
A Club Donation		_____
ARRL Member? Yes No	Total Enclosed	_____

Your License Class (If you have one.)

<input type="radio"/> Technician	Name _____
<input type="radio"/> General	Address _____
<input type="radio"/> Advanced	_____
<input type="radio"/> Extra Class	Email _____
	Phone _____
	Your Call sign _____
	Your Signature _____

Make check or money order payable to:

The Beaver Valley Amateur Radio Association, P.O. Box 424
South Heights, Pa 15081

Hamfests & General Announcements

Warren County HAMFEST 2021

Talk-in 147.015
pl. 186.2

Presented by

BSA, Venture Crew 73

*Providing Emergency & Support Communications
For Community Events.*

Saturday, March 13 7:00am - noon

**ALL ATTENDING MUST WEAR A MASK &
OBSERVE SOCIAL DISTANCING**

**BSA Venture Crew 73 will be hosting an
ARRL sanctioned Hamfest in Youngsville, PA.**

Admission: \$5 donation under 12 FREE

Tables to sell or display items:

Presale \$10 donation per 8' table. (3+ Tables \$8 each).

At the door \$15.00 donation per 8' table. (3+ Tables \$12 each).

Setup 6:00am - 7:00am



Events include hourly door prizes, VE session.

Food concession will be available Starting 7am.

Free license exams will be conducted at 8 am by the Laurel AHRA VE team.

Things you will need to know and bring to your exam.

1. A legal photo ID (driver's license, passport). When no photo ID is available, two forms of identification must be presented:
 - a. Non-photo ID/driver's license (some states still have them).
 - b. Birth certificate (must have the appropriate seal).
 - c. Social security card.
 - d. Library card.
 - e. Utility bill, bank statement or other business correspondence that specifically names the person; or a postmarked envelope addressed to the person at his or her current mailing address as it appears on the Form 605.
2. Students may bring any of the above items and/or a school ID, minor's work permit, report card, or a legal guardian may present a photo ID.
3. Provide your FRN (FCC Registration Number) Those who already have a license issued by the FCC have an FRN (it's on your license). You can obtain an FRN by registering your SSN with the FCC at its website: <https://apps.fcc.gov/coresWeb/publicHome.do>
The instructions are easy to follow. Just click on the "Register" button and follow the instructions.
4. If upgrading your current license.
4. Bring a copy of your current license for our records. Original or reference copy.
- b. Original and a copy for our records any unexpired Certificate of Successful Completion of Exam (CSCE) indicating which credit(s) you've earned.

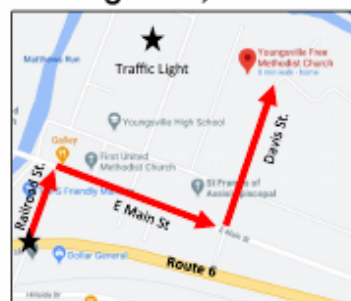
For more information or table reservations Contact:

Russ Bush - N3YD
n3yd@usa.com
814-564-9202

Tim Sampson - K3TMS
k3tms@protonmail.com



**Youngsville Free Methodist Church
179 Davis St.
Youngsville, PA 16371**



Hamfests & General Announcements



QSO Today Virtual Ham Expo Saturday and Sunday, March 13 & 14, 2021

The next QSO Today Expo is approaching fast, taking place on March 13-14, 2021. **This Expo will be even better with many new speakers, kit building workshops, panel discussions, booth prizes, and much more.**

Early Bird discount tickets are available for a limited time and include entry for the Live 2 day period plus the 30-day on-demand period. **[Click here to register!](#)** ARRL, the national association for Amateur Radio® in the United States, is a QSO Today Expo Partner.

Bits and Pieces

Hello all,

The warm weather at the end of February sure got me dreaming of the new High Frequency antenna I want to install. Just like the tree sap currently flowing for the maple syrup harvest, this break in the winter weather has similarly got the radio sap flowing in me. I want to start a few outdoor station improvements. I have completed many of my indoor radio improvements during the cold months. I am impatiently awaiting warm weather to get a new HF antenna up and running! How about you? Do you have some station improvements you are planning this spring? I would like to hear from you. Please email me with your plan, I would like to share it with the eQRM readers.



This winter I was trying to decide what I would like to make my next steps in station improvement. I was thinking about an amplifier. I did a bunch of research on the subject. I have put the amp on the back burner for now. After my research, it makes way more sense to make antenna improvements first. I have many improvements that can help my signal by mere antenna changes. The cost of an amp is much more than what it will cost to have better antennas. In particular, I have an idea for a HF antenna I hope to implement soon. There are some DIY antennas I would like to try also. I need to make better antenna choices before even thinking about an amplifier. I need to maximize the transmit and receive qualities of my station's antennas before I purchase an amplifier.

During the writing of this eQRM my old computer bit the dust. My friend Barbara K. gave me a very nice replacement computer. The "new" computer has Windows 10 on it. It has taken me a sizable amount of time and effort to get things together for this month's newsletter. I am up to the task. Thanks to Barb for saving the day! I will use the new computer in my shack and for future eQRM newsletters. I am grateful. Thank you Barbara.

No matter what you do with your amateur radio hobby, please remember to be safe. Preplan all you can, ask for help and advice from fellow hams. I am all about safety. My hope is to encourage you to think safety first, too. Please take care while enjoying your hobby.

I have been alluding to something pretty big that is going to take place in my personal amateur radio hobby. I will share some details soon. I am waiting for Spring-like weather to add this new improvement to my station. Stay tuned.

***** This just in :** There is a Hamfest this month in western Pennsylvania!!! I wanted to establish for certain there will be a hamfest March 13th. I talked to Russ Bush and he confirmed their hamfest is on! See page 9 for the details. <http://www.arrl.org/hamfests/warren-county-hamfest-2>

Till next month, 73 KC3BXC clear but I'll be listening...

It's Your Dime

It's Your Dime

Remember back when you could communicate by "Pay Phone" for ten cents? This page is for anyone who wants to communicate with the BVARA community and beyond. Please send me your article that you would like posted on this page. Please, only topics and language in good taste. As the editor I reserve the option to post it or ignore it. Send your dime to me at: kc3bxc.73@gmail.com



Amateur Radio Continues to Contribute to Society

Some people have argued that amateur radio is not only declining, but is also becoming more irrelevant when it comes to technology, science, and ideas that contribute to the betterment of our lives. They say that we are living in the past, living with our teenage technical likes, refusing to move into the 21st Century of scientific advancements.

Au contraire, dear amateur radio friends! Amateur radio has continued to progress and keep pace with other arts and sciences, because amateur radio, as a hobby even from its humble beginning to the present, continues its advancement in communications engineering and electronics that offer new opportunity for societal enrichment.

The *ARRL News* article of February 17th highlights the innovative ideas and implementation of communications technology to enable Scott, VE7TIL to be the first amateur to copy the signal from China's Tianwen-1 probe, which went into orbit around Mars on February 10.

In a personal communication with Scott:

Hi Rich

The dish is actually 66cm (26") in diameter. Tianwen-1 and MRO* have fairly large dish antennas and a high ERP. MRO for example has a 3m dish and a 100W transmitter. Tianwen-1 has a similar sized dish and I assume a similar size transmitter. As Tianwen-1's present orbit is relatively far from Mars the impact of Doppler on the signal is less and makes it easier to copy that MRO which is in a low mars orbit and it's signal gets drifted a fair amount by Doppler so averaging doesn't work so well to improve SNR.

Back in October I did an analysis on the TW-1 signal level and propagated the results to its arrival at Mars using the free space loss equation.
<https://twitter.com/coastal8049/status/1325266649482555392>

The results fit my data very well.

It's Your Dime

You need to remember as frequency goes up the gain one gets from a given size dish increases. That and the fact 8.4GHz is largely immune to attenuation by rain and water in the atmosphere makes it an ideal band for deep space communication.

My dish on 2.2GHz (S-band) has a theoretical gain of 22.8dB, but on 8.4GHz (X-band) the gain is 34.4dB.

73 Scott



Scott Tilley's backyard dish.

***MRO is the NASA Mars Reconnaissance Orbiter**

The ARRL's Elser-Mathes Cup could soon be awarded, after 87 years. Look it up.

Amateur radio has continued to progress and flourish!
Rich – K3SOM

British Columbia Radio Amateur Copies Signal from Mars-Orbiting Satellite*

02/17/2021

As reported on Spaceweather.com, Canadian radio amateur Scott Tilley, VE7TIL, has snagged another signal from deep space. His latest conquest has been to copy the signal from China's **Tianwen-1** (pronounced "tee-EN-ven") probe, which went into orbit around Mars on Febru-

It's Your Dime

ary 10. Tilley told Spaceweather.com that the probe's X-band signal was "loud and audible." "It was a treasure hunt," Tilley told Spaceweather.com. He explained that while the spacecraft did post its frequency with the International Telecommunication Union (ITU), it was too vague for precise tuning (X band is between 8 GHz and 12 GHz).

Launched last July, Tianwen-1 represents China's first Mars mission. It consists of an orbiter and a rover, which will land on the Martian surface in May or June 2021. It is able to photograph the planet's surface while in orbit.

Finding signals from deep space is a sub-hobby for Tilley, who seeks what he calls "zombie satellites" among other signal sources. In 2020, he tracked and identified signals from the experimental UHF military communication satellite LES-5. Tilley said he found the satellite in what he called a geostationary "graveyard" orbit after noting a modulated carrier on 236.7487 MHz. Launched in 1967, LES-5 was supposed to shut down in 1972, but it continues to operate as long as its solar panels are facing the sun, Tilley explained.

In 2018, while hunting for an undisclosed US government spacecraft lost in a launch mishap, he spotted the signature of IMAGE (Imager for Magnetopause-to-Aurora Global Exploration), a NASA spacecraft believed to have died in December 2005. The [discovery](#) delighted space scientists.

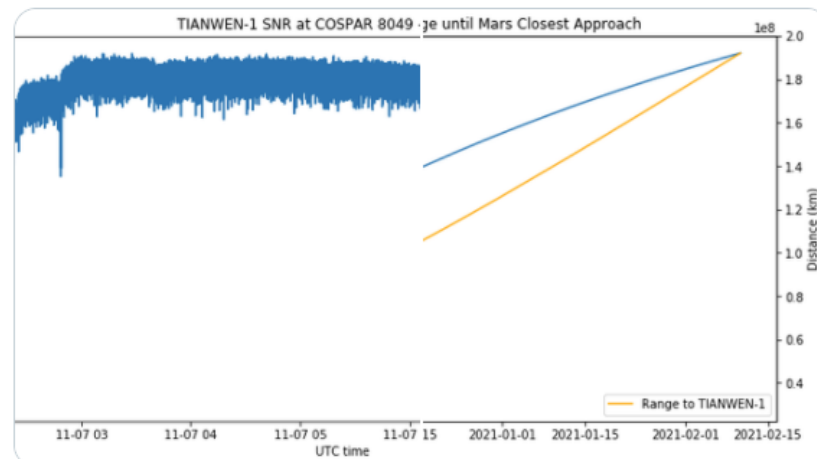
Tilley has also picked up signals from NASA's [Mars Reconnaissance Orbiter](#), and the United Arab Emirates Hope probe, both orbiting Mars some 124 million miles away. He uses a home-made 60-centimeter dish and relies on software-defined radios (SDRs) to accomplish the task. Radio amateurs have been listening for signals from space since the 1957 launch of Sputnik 1, which transmitted at around 20 MHz.

The Spaceweather.com reference article above: *Ham Radio Signal from Mars* can be found at: <https://www.spaceweather.com/archive.php?view=1&day=17&month=02&year=2021>

*Courtesy, ARRL.org Web site News:

<http://www.arrl.org/news/british-columbia-radio-amateur-copies-signal-from-mars-orbiting-satellite>

SNR study shows that TIANWEN-1 should be easily audible upon arrival at Mars in Feb 2021. Expected from 2020-11-07 -11.1dB path loss.



Of Interest to All

A Look at our BVARA Winter Field Day Activity

“Emergency communications in a Winter environment is just as important as the preparations and practice that is done each Summer but with some additional unique operational concerns.” That is the focus of what the sponsors of Winter Field Day promote. Further, “Maintaining your operational skills should not be limited to fair weather scenarios. Disasters are unpredictable by nature and can strike when you least expect them. Preparedness is the key to a professional and timely response during any event no matter what time of the year it happens.”

The past five years have provided our club members with the opportunity to actively participate in each of the operational categories: **Outside** in a temporary shelter with emergency power and temporary antennas; **Indoors** from a temporary, remote location with all equipment and antennas set up for the event; and **Home** at your normal location of operation. The recent Covid-19 situation made the Home classification a better choice given the many unknowns that existed.

Winter Field Day (WFD) in Western Pennsylvania has provided our club participants with some new challenges. It's cold outside! Welcome to wind chill effects! Putting up antennas takes a lot longer. Running stiff coax cables and making outdoor connections adds to the extra setup time that is required. Generators and Inverters need to be maintained prior to WFD to make starting them easier. Just walking through heavy snow can tax one's energy.

Check out our club results over the last five years of participation. Despite these five years of activity happening around the bottom of the Sunspot Cycle, club members have gained valuable experience in planning and setting up our stations. Steadily improving numbers of contacts, expansion of operating modes and bands (when open and available), use of specialized contesting hardware and software tools have helped to improve our overall results. Good food, a welcome environment for new hams and visitors, and positive attitudes really helped boost our enjoyment of the event.

BVARA Winter Field Day Results*

Year	Class	PH	CW	DIG	160	80	40	20	15	10	VHF	Tot	Mult	Pwr	Bonus	Claim
2017	2I	208	0	0	0	38	112	58	0	0	0	208	3	2	3000	4248
2018	1O	372	0	0	2	167	180	23	0	0	0	372	4	2	3000	5976
2019	2H	390	0	0	0	93	200	97	0	0	0	390	3	2	0	1170
2020	2H	357	1	0	1	116	147	93	0	0	0	357	5	2	0	3590
2021	2H	357	0	29	0	26	325	47	2	0	0	400	7	2	0	6006

*Results listed above represent submitted totals and summaries from N3FJP software application.

This year Jim, KC3IXE Tony, K3AHP Norm, K3NJT Tim, KA3JRT John, KC3QCG and Tom, WB1AHL stopped by the K3SOM home to operate, bring food, help with logging, enjoy several interesting discussions, and have a great time during this lockup period. Once again, we've had fun operating Winter Field Day for our club station, W3SGJ!

Of Interest to All



This is a lovely spread of enjoyment to share!



Jim KC3IXE shows how to make contacts with a digital voice box.



Tony K3AHP connects to the Skyhawk Yagi with his new Elecraft KX3.



Looks like bandits raiding the buffet... Naw, it's just masking for Covid-19 protection.

Of Interest to All

Intro to Slow Scan TV



Tuning around the 20M band, have you ever heard what sounds like aliens on 14.230? You have just stumbled upon the biggest watering hole for Slow Scan TV (SSTV) in all of the amateur radio spectrum.

If you are already using FT8 or one of the other digital sound card modes, you already have all the equipment you need to get involved.

If you want to get in on the action, but don't know where to start, David Day N1DAY has started a series of free weekly **Zoom sessions** to help new SSTV operators get started.

Times:

The Wednesday meetings will be conducted at 7:30PM EST.

The Saturday Meetings will be conducted at 10:30PM EST for those living in the Western US.

The **passcode** for these **Zoom meetings** is **979-0600-2308**

Submitted by Rob KB3BFM

Radio Sport

Bruce Draper, AA5B, aa5b.corral@gmail.com

Contest Corral

March 2021

Check for updates and a downloadable PDF version online at www.arrl.org/contest-calendar.

Refer to the contest websites for full rules, scoring information, operating periods or time limits, and log submission information.

Start - Finish	Date-Time	Date-Time	Bands	Contest Name	Mode	Exchange	Sponsor's Website
1	0000	1 0100	1.8-14	K1USN Slow Speed Test	CW	Max 20 WPM, name, SPC	www.k1usn.com/sst.html
1	1630	1 1729	3.5, 7	OK1WC Memorial (MWC)	CW	RST, serial	memorial-ok1wc.cz
1	2000	1 2130	3.5	RSGB 80-Meter Club Championship, Data	Dig	RST, serial	www.rsgbcc.org/hf
2	0100	2 0159	1.8-50	Worldwide Sideband Activity Contest	Ph	RS, age group	www.sac.com/rules.html
2	0200	2 0400	3.5-28	ARS Spartan Sprint	CW	RST, SPC, power	arsqr.blogspot.com
2	1700	2 1900	3.5-14	RTTYOPS Weekspint	Dig	Other's call, your call, serial, name	rttyops.wordpress.com
2	1900	2 2100	3.5	AGCWYL-CW Party	CW	RST, serial, name	alt.agcw.de/index.php/en
3	1300	3 1400	1.8-28	CWops Mini-CWT Test	CW	Name, mbr or SPC	cwops.org/cwops-tests
3	1700	3 2000	144	VHF-UHF FT8 Activity Contest	Dig	4-char grid square	ft8activity.eu/index.php/en
3	1900	3 2000	1.8-28	CWops Mini-CWT Test	CW	Name, mbr or SPC	cwops.org/cwops-tests
3	2000	3 2100	3.5	UKEICC 80-Meter Contest	Ph	6-char grid square	www.ukelcc.com/80m-rules.php
4	0300	4 0400	1.8-28	CWops Mini-CWT Test	CW	Name, mbr or SPC	cwops.org/cwops-tests
4	1800	4 2200	28	NRAU 10-Meter Activity Contest	CW Ph Dig	RS(T), 6-char grid square	nrrlcontest.no/index.php
4	2000	4 2200	1.8-50	SKCC Sprint Europe	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
5	0145	5 0215	1.8-21	NCCC RTTY Sprint	Dig	Serial, name, QTH	www.ncccsprint.com
5	0230	5 0300	1.8-21	NCCC Sprint	CW	Serial, name, QTH	www.ncccsprint.com
6	0000	7 2359	1.8-28	ARRL International DX Contest, SSB	Ph	W/VE: RS, SP, DX; RS, power	www.arrl.org/arrl-dx
6	0000	14 2359	3.5-144	Novice Rig Roundup	CW	Name, QTH, rig, mbr	www.novicerigroundup.org
6	0600	6 0800	7, 14	Wake-Up! QRP Sprint	CW	RST, serial, suffix of previous QSO	qrp.ru/contest/wakeup
6	1800	7 1359	1.8-28	Open Ukraine RTTY Championship	Dig	State/province/canton/etc, serial	krs.ho.ua/openrtty
7	0700	7 1100	3.5	UBA Spring Contest, CW	CW	RST, serial, UBA section (if ON)	uba.be/hf/contest-rules
7	1200	7 2200	3.5	NSARA Contest	CW Ph Dig	RS(T), county (if Nova Scotia)	nsara.ve1cty.net/?page_id=82
7	1800	7 2200	3.5	WAB 3.5 MHz Phone	Ph	RS, serial, WAB square or country	wab.intermlp.net
10	1700	10 2000	432	VHF-UHF FT8 Activity Contest	Dig	4-char grid square	ft8activity.eu/index.php/en
10	2000	10 2130	3.5	RSGB 80-Meter Club Championship, CW	CW	RST, serial	www.rsgbcc.org/hf
10	2300	14 2300	3.5-14	AWA John Rollins Memorial DX Contest	CW	RST, eqpt type and year	antiquewireless.org
13	0000	13 2359	3.5-28	YB DX RTTY Contest	Dig	RST, serial	rtty.ybdxcontest.com
13	0600	14 1100	50-1296	SARL VHF/UHF Analogue Contest	CW Ph	RS(T), 6-char grid	www.sarl.org.za
13	1000	14 1000	3.5-28	RSGB Commonwealth Contest	CW	RST, serial	www.rsgbcc.org/hf
13	1200	14 1200	3.5-144	F9AA Cup, SSB	Ph	RST, serial	www.site.urc.asso.fr
13	1200	14 1200	28	South America 10-Meter Contest	CW Ph	RS(T), CQ zone	sa10m.com.ar
13	1200	14 2359	1.8-50	SKCC Weekend Sprintathon	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
13	1400	13 2000	3.5-28	AGCW QRP Contest	CW	RST, serial, class, mbr or "NM"	alt.agcw.de/index.php/en
13	1400	14 2100	3.5-50	Oklahoma QSO Party	CW Ph	RS(T), county or SPC	k5cm.com/okqp.htm
13	1500	14 1500	1.8	Stew Perry Topband Challenge	CW	4-char grid square	www.kkn.net/stew
13	1600	14 1600	3.5-28	EA PSK63 Contest	Dig	RSQ, province or serial	concursos.ure.es/en
13	1800	14 0559	3.5, 7	Tesla Memorial HF CW Contest	CW	RST, serial, 4-char grid	www.radiosport.org.rs
13	1800	14 1800	1.8-50	QCWA QSO Party	CW Ph Dig	Year first licensed, name, SPC	www.qcwa.org
13	1900	14 1900	1.8-28	Idaho QSO Party	CW Ph	County or SPC	pocatielloarc.org/idaohqsoaparty
13	2300	14 0300	3.5-14	North American Sprint, RTTY	Dig	Other's call, your call, serial, name, SPC	ncjweb.com
14	1400	17 0800	1.8-144	Classic Exchange, Phone	Ph	Name, RS, SPC, rig	www.classicexchange.org
14	1800	15 0100	All	Wisconsin QSO Party	CW Ph Dig	County or SPC	www.warac.org/wqp
15	0000	15 0200	1.8-28	4 States QRP Second Sunday Sprint	CW Ph	RS(T), SPC, mbr or power	www.4sqrp.com
15	1800	15 2059	3.5, 7	Bucharest Digital Contest	Dig	RST, serial	yo3test201x.blogspot.com
15	2000	15 2130	3.5	RSGB FT4 Contest Series	Dig	4-char grid square	www.rsgbcc.org/hf
16	1700	21 1700	3.5-28	CLARA Chatter Party	CW Ph	RS(T), name, SPC	clarayl.ca/chatter-party
18	0030	18 0230	3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or power	naqcc.info
18	1930	18 2059	3.5	BCC QSO Party	CW Ph Dig	RS(T), t-shirt size	bavarian-contest-club.de
20	0200	22 0159	3.5-28	BARTG HF RTTY Contest	Dig	RST, serial, 4-digit UTC time	www.bartg.org.uk
20	1200	21 1200	1.8-28	Russian DX Contest	CW Ph	RS(T), oblast or serial	rdxc.org/asp/pages/rules.asp
20	1400	20 1800	144, 432	AGCW VHF/UHF Contest	CW	RST, serial, power, 6-char grid	alt.agcw.de/index.php/en
20	1400	21 2359	All	Virginia QSO Party	CW Ph Dig	Serial, county or SPC	www.qsl.net/sterling
20	2000	20 2159	1.8-28	Feld Heli Sprint	Dig	RST, mbr, SPC, grid	google.com/site/feldheliclub
21	0700	21 1100	3.5	UBA Spring Contest, SSB	Ph	RS, serial, UBA section or serial	uba.be/hf/contest-rules
21	2300	22 0100	1.8-28	Run for the Bacon QRP Contest	CW	RST, SPC, mbr or power	qrpcontest.com/pigrun
24	0000	24 0200	1.8-50	SKCC Sprint	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
25	2000	25 2130	3.5	RSGB 80-Meter Club Championship, SSB	Ph	RS, serial	www.rsgbcc.org/hf
27	0000	27 2359	1.8-VHF	FOC QSO Party	CW	RST, name, mbr (if any)	g4foc.org/qsoaparty
27	0000	28 2359	1.8-28	CQ WW WPX Contest, SSB	Ph	RS, serial	www.cqwp.com
31	2000	31 2100	3.5	UKEICC 80-Meter Contest	CW	6-char grid	www.ukelcc.com/80m-rules.php

There are a number of weekly contests not included in the table above. For more info, visit: www.qrpfoxhunt.org, www.ncccsprint.com, and www.cwops.org. All dates refer to UTC and may be different from calendar dates in North America. Contests are not conducted on the 60-, 30-, 17-, or 12-meter bands. Mbr = Membership number. Serial = Sequential number of the contact. SPC = State, Province, DXCC Entity. XE = Mexican state. Listings in blue indicate contests sponsored by ARRL or NCJ. The latest time to make a valid contact QSO is the minute listed in the "Finish Time" column. Data for Contest Corral is maintained on the WA7BNM Contest Calendar at www.contestcalendar.com and is extracted for publication in QST 2 months prior to the month of the contest. ARRL gratefully acknowledges the support of Bruce Ham, WA7BNM, in providing this service.