

We'll be ZOOMing our next  
Meeting

Time 7:00 PM June  
(Wednesday)

ZOOM: meeting 845 1387 0070

There's a direct link to ZOOM  
posted at:

<http://www.redxa.com/>

Check your email for the "Meeting ID"  
and password. You should have received  
an email with this information. If not,  
contact one of the club officers.

# SUNSPOTS



## REDWOOD EMPIRE DX ASSOCIATION

P.O. Box 750834, Petaluma, CA 94975

Volume XXIII

Number VI

JUNE 2021

### Club Officers:

#### PRESIDENT:

Roger Cooper, N3RC

[rogem3rc@gmail.com](mailto:rogem3rc@gmail.com)

#### VICE PRESIDENT:

Bill Sirvatka, WX3B

[billys95402@icloud.com](mailto:billys95402@icloud.com)

#### SECRETARY:

Doug Bender, WW6D

[ww6d@arrl.net](mailto:ww6d@arrl.net)

#### TREASURER:

Fred Leoni

[N6YEU@aol.com](mailto:N6YEU@aol.com)

#### DIRECTORS:

Josh Fiden, W6XU

[w6xu@arrl.net](mailto:w6xu@arrl.net)

Jim Selmi

[jseml@hotmail.com](mailto:jseml@hotmail.com)

#### EDITOR:

Alan Eshleman K6SRZ

### Meeting Announcement

We continue to meet by ZOOM. For the June 9 meeting, our program will be

**ABCs of RFI for Hams**  
By  
**Bob Brehm, AK6R**

Further details can be found on Page 5 of this issue of "Sunspots"

### President's Commentary

Well, we have survived COVID and the propagation gods will reward us justly! It's usually good to be optimistic.

There have been a couple of World-wide on-line meetings recently like Contest University, the QSO Today Virtual Ham Expo 2021 and Hamvention Forums. If you did not attend, most have saved the presentations online and you can peruse at your pleasure. My favorite was the DXLab presentation by developer Dave AA6YQ. I have used DXLab for 10 years and thought I knew my stuff. I am obviously not as dedi-

## President's Commentary (cont.)

cated a dxer as AA6YQ and even though I am a numbers guy, his in-depth use of the tools he has created blew my mind. DXLab is free, the support is fantastic, and as a retired computer guy I am super impressed with this suite of software. I have never seen such stable software which is also changed so quickly based on users input.

I finally got my Steppir DB-36 running again and am working on getting my sattelite stuff with Icom 9700 and Yaseu G-5500 going this summer.

I had some trouble with keying using N1MM+ during CQWPX CW which turned out to be totally operator error. RTFM. I have got to get better at testing all the hardware/software before the contest begins, particularly with all the software used plus the Flex software.

Very glad to see 6m so open and so active. FT-8 has generated more interest in 6M than I have ever seen since the late 50's.

Alan has spoken to Daniel at the Cafe and Daniel and I will get connected about restarting meetings in person possibly in July. I would appreciate some feedback on in person meetings.

Our next speaker is Bob Brehm, AK6R of Palomar Engineers. This company has been around a long time and, under Bob, has changed their product line greatly. I just bought a big current balun from them for a new 260' OCF I am going to put up this summer. Take a look at the web site <https://palomar-engineers.com>.

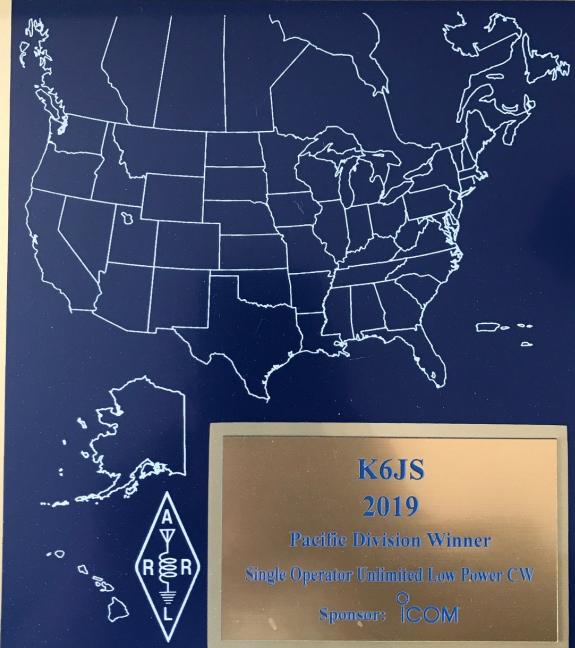
Haven't tried any of the new modes on WSJT-X, if anyone has done so, sharing your experiences would be appreciated.

The long delays on the K-4 have certainly engendered lots of emails but now that Rob Sherwood has published his K-4 report on performance, they seem to never stop.

Looking forward to some eyeball qso's in near future.

73 Roger N3RC

# ARRL • NOVEMBER SWEEPSTAKES



Some new lumber for REDXA member  
Jim Selmi, K6JS. Congratulations, Jim

## 2020 California QSO Party

**SECOND PLACE**  
**Single-Operator**  
**Low Power Assisted**  
**K6JS**

Sponsor: K6TD



**ABCs of RFI for Hams**  
**By**  
**Bob Brehm, AK6R**

Is your transmitter the SOURCE of RFI affecting electronic devices in your own house or your neighbor's house? Are you the VICTIM of RFI from your own electronic devices or from devices in your neighborhood? Do you want to reduce your receiver noise floor so you can hear local contacts and more DX?

If you answered YES to any of these questions and would you like to find a quick and easy solution, then you should attend this presentation where you will learn how to troubleshoot and minimize RFI issues so you can have more time to operate and enjoy ham radio.

Topics in this talk include:

- Fundamentals of RFI – identifying symptoms, pinpointing causes & applying simple cures
- What's a ferrite and how to choose & buy the right ferrite for your RFI issue
- How to use ferrites to solve the #1 RFI problem shared by all hams using HF radios
- How to choose and use ferrites to solve transmitter RFI problems in your home or neighborhood
- How to choose and use ferrites to reduce receiver noise and hear more DX

During the presentation you will see many examples of feed line chokes, baluns, ununs, and various practical applications of ferrites for AC/DC power lines, computer interconnect cables, transceivers, linear amplifiers, home theater systems, etc.

Bring your questions and pay attention to win one of the prizes at the end of the talk.



Six meters because of its propensity to be so unpredictable in its openings is known as the “Magic Band”.

The Fillmore Auditorium psychedelic rock n roll show poster shown at the right lists “Captain Beefheart and His Magic Band.”

I got the poster and a fresh apple personally handed to me by the late Bill Graham when I attended the show. It cost \$1.25



The Gonset Communicator a.k.a. goony bird, a self contained, crystal controlled six meter transceiver with “magic eye” tuning indicator ca. 1952.





The **Global Oscillation Network Group** (GONG) is a worldwide network of six identical telescopes, designed to have 24/7 observations of the [Sun](#). The network serves multiple purposes, including the provision of operation data for use in space weather prediction, and the study of solar [internal structure](#) and dynamics using [helioseismology](#).

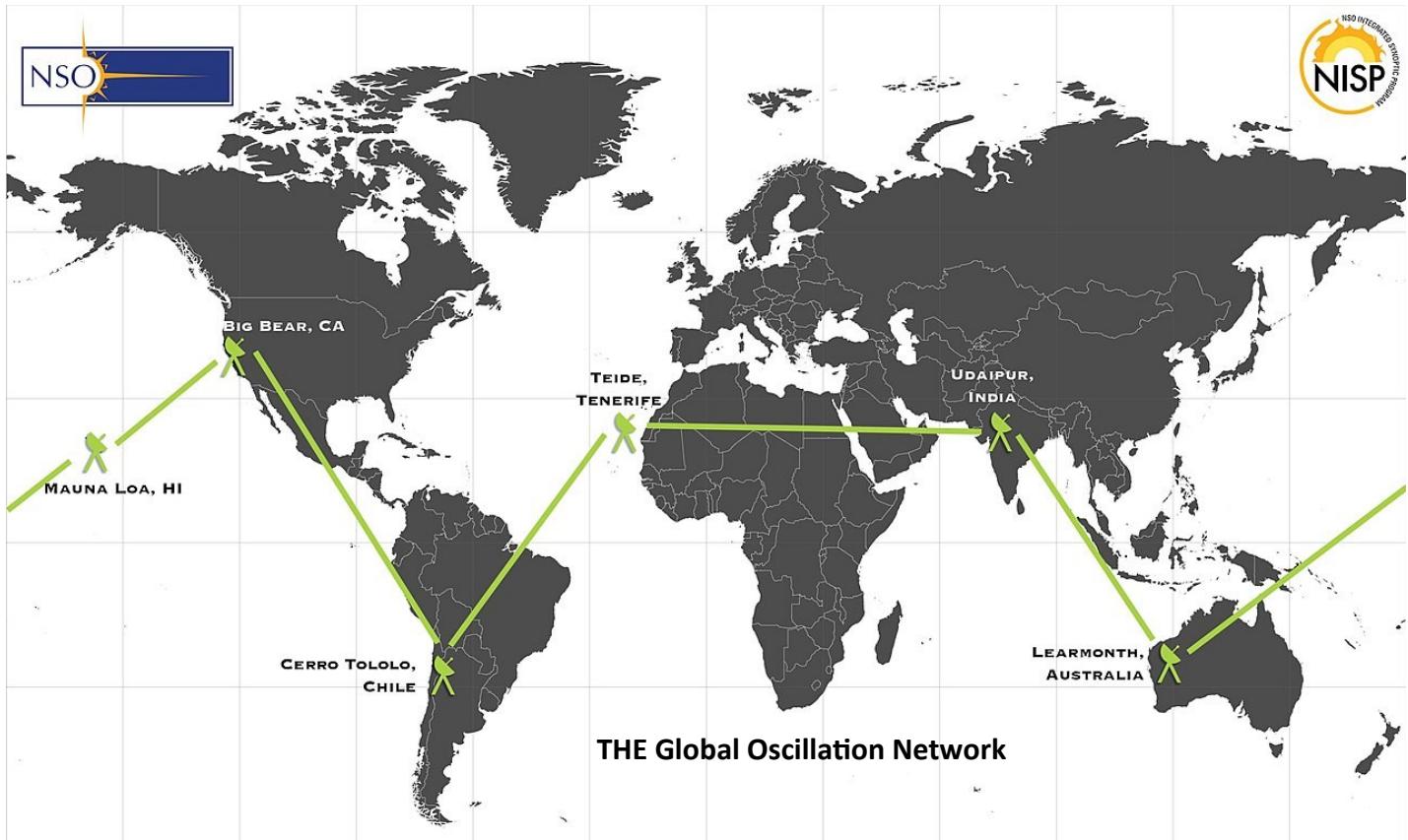
Deployed in 1995, GONG is a set of six observing systems geographically distributed around the Earth so that the Sun can be observed as continuously as possible. The six observatories are the [Teide Observatory \(Canary Islands\)](#), the [Learmonth Solar Observatory \(Western Australia\)](#), the [Big Bear Solar Observatory \(California\)](#), the [Mauna Loa Solar Observatory \(Hawaii\)](#), the [Udaipur Solar Observatory \(India\)](#) and the [Cerro Tololo Inter-American Observatory \(Chile\)](#).

With these sites, GONG typically can observe the Sun 91% of the time, 24/7. GONG was constructed to provide observations for helioseismology, which aims to understand the solar interior by analyzing the sound waves that are trapped in it. In 2001, the original GONG detectors were upgraded to 1000 x 1000 pixels and continuous [magnetograms](#) were implemented, and the new system is known as GONG++. While GONG still provides helioseismology data, it now also provides full-disk solar magnetic field maps (magnetograms) every minute and full-disk images of the Sun in the wavelength of the [Hydrogen- \$\alpha\$  \( \$H\alpha\$ \)](#) spectral line every 20 seconds. These data products are used for research into the solar magnetic field and chromosphere but are also essential inputs into forecasts of space weather. The NOAA [Space Weather Prediction Center](#) (SWPC), the US Airforce [557th Weather Wing](#), and the [NASA Community Coordinated Modeling Center](#) (CCMC) all use GONG data to predict space weather conditions.

The GONG Project is managed by the [National Solar Observatory's Integrated Synoptic Program \(NISP\)](#), which is operated by [AURA, Inc.](#) under a cooperative agreement with the [National Science Foundation](#).

Credit: Wikipedia





Redxa Field Day plans and suggestions  
on the following page.

## Field Day 2021

Field Day this year will be much like Field Day 2020 since we are not yet out of the effects of the pandemic. As with last year, we will not be operating as Call A from Marin Rod and Gun Club but rather operating from our home stations with the ARRL aggregating our scores. Field Day will be June 26-27, beginning at 1800 UTC Saturday and ending at 2059 UTC Sunday. Here are the suggested classes of operation that are available this year as taken from the official ARRL Field Day rules:

**Class B:** One or two person portable: A Field Day station set up and operated by no more than two persons. Other provisions are the same for Class A except it is not eligible for a GOTA or free VHF station. One and two person Class B entries will be listed separately.

**Class B - Battery** One or two person portable: A Field Day station set up and operated by no more than two persons. All contacts must be made using an output power of 5 Watts or less and the power source must be something other than commercial mains or motor-driven generator. Other provisions are the same for Class A except it is not eligible for a GOTA or free VHF station. One and two person Class B - Battery entries will be listed separately.

**Class C** Mobile: Stations in vehicles capable of operating while in motion and normally operated in this manner. This includes maritime and aeronautical mobile. If the Class C station is being powered from a car battery or alternator, it qualifies for emergency power but does not qualify for the multiplier of 5, as the alternator/battery system constitutes a motor-driven generating system.

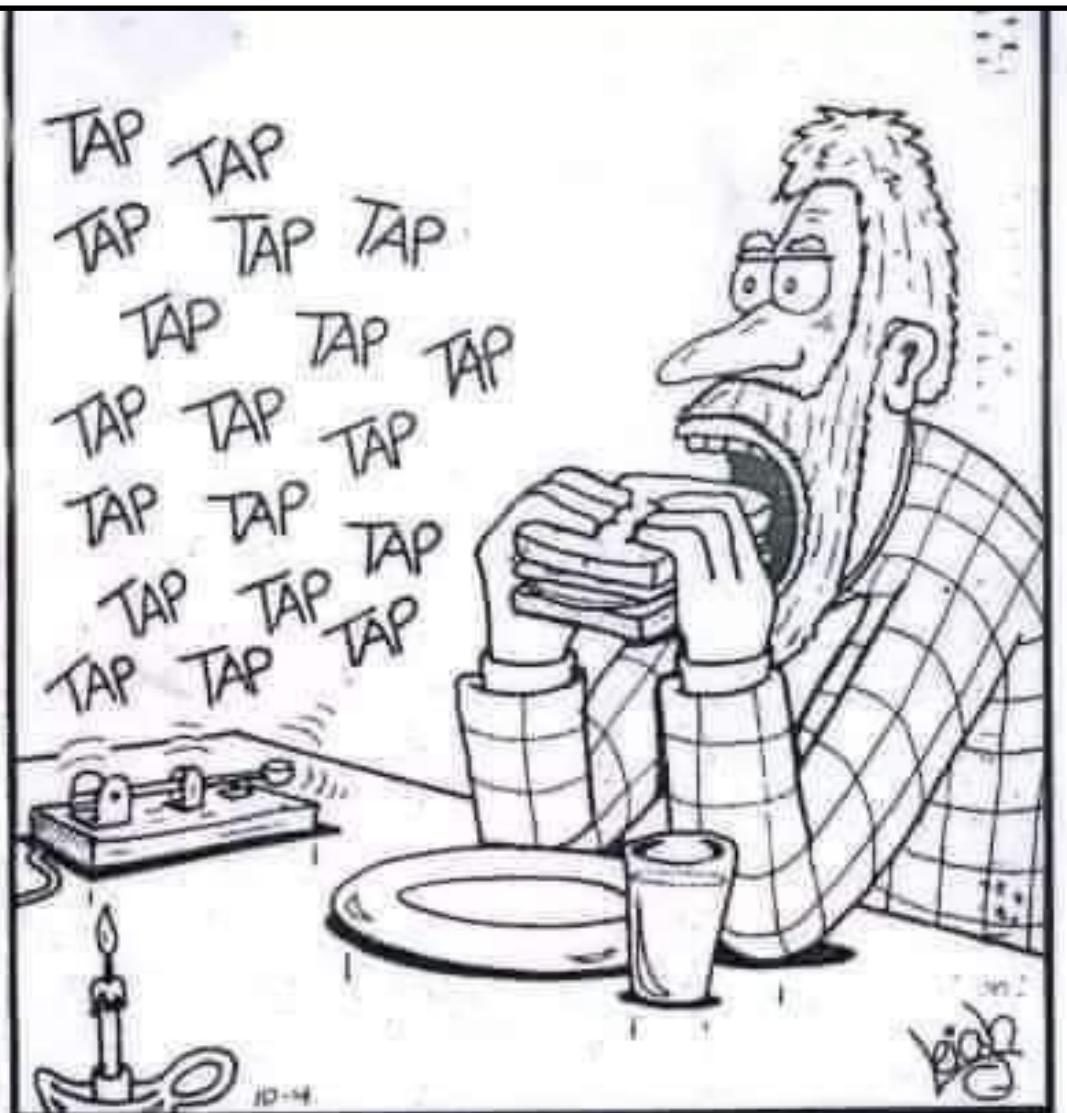
**Class D** Home stations: Stations operating from permanent or licensed station locations using commercial power. Again this year, the temporary rules allow for Class D stations to contact other Class D stations for points. *The temporary rules require that maximum power allowed for Class D is 150 Watts.*

**Class E** Home stations - Emergency power: Same as Class D, but using emergency power for transmitters and receivers. Class E may work all Field Day stations. See 2021 power limitation above.

Three modes of operation are available: Phone, CW and Digital. A station may be worked once in each mode per band. Each station must submit their own entry to the ARRL but be sure to indicate that your club is "REDXA/MARS". Complete Field Day 2021 Rules are available at: <http://www.arrl.org/field-day-rules>,

We are all hopeful that next year we can operate together the way we normally do, and we already have Field Day weekend 2022 reserved with Marin Rod & Gun Club. I hope to work a whole bunch of REDXA members in this year's event!

Ron Castro, N6IE  
Field Day Chairman  
Redwood Empire DX Assn.



No sooner had Samuel Morse devised his famous code than he was harassed nightly by annoying telegram marketers.



## MAY MEETING MINUTES

by Doug WW6D, Secretary

The monthly meeting was held on Zoom May 12, 2021. Social hour began at 6:30 pm, hosted by President Roger Cooper, N3RC. Formal meeting began at 7:00 pm. During the meeting, 24 participants were noted.

Old business: none.

New business: Minutes and Treasurer's report were approved as published in the Sunspots newsletter. It was moved, seconded and approved to send \$250 to NCDXF (Northern California DX Foundation). Ron N6IE reiterated that the rules changes for Field Day 2020 will carry over to this year's, which allow home stations ("D") to work other home stations.

Fred N6YEU, as treasurer, noted that several members had not yet renewed their membership by submitting their dues in a timely manner (\$20 per year). He outlined several reasons to support the club, as there still exist expenses for the Post Office box, supporting NCDXF, pay for Zoom meetings etc. He encouraged everyone to check the roster on the club website and send in your dues (or use the new Square service to submit via the club website).

Program: Transceiver Performance by Rob Sherwood, NC0B. Rob founded Sherwood Engineering in 1974, offering Drake upgrades. Started testing transceivers in 1976, which now total over 100. Look at: [www.sherweng.com/table.html](http://www.sherweng.com/table.html) for the latest list.

This was an update from Rob's presentation about a year ago. This time, it included results and operating impressions of the Icom IC-7300, the new QRP rig IC-705 and a recap of the IC-7851. Further, he discussed expectations, based on the radio's architecture, of the new Elecraft K-4. All very enlightening!

Meeting adjourned at 8:26 pm.

### **REDXA Calendar of Upcoming Events**

by Doug WW6D

**Jun 9 \* REDXA Monthly Meeting**

**Jun 19-20 All Asian DX Contest, CW**

**Jun 26-27 ARRL Field Day (same rules as last year's)**

**Jul 10-11 IARU HF Championship**

**Jul 14 \* REDXA Monthly Meeting**

**Aug 11 \* REDXA Monthly Meeting**

**Sep 8 \* REDXA Monthly Meeting**

**Refer to <https://www.contestcalendar.com/contestcal.html> for more contest information.**

**DXCC entities worked since January 2021. Data copied from Club Log**

**MIXED**

<b>Rank</b>	<b>Callsign</b>	<b>160</b>	<b>80</b>	<b>40</b>	<b>30</b>	<b>20</b>	<b>17</b>	<b>15</b>	<b>12</b>	<b>10</b>	<b>6</b>	<b>DXCC</b>	<b>Slots</b>	<b>Range</b>
1	KC6AWX	5	22	48	12	104	37	15	1	0	7	192	251	33 yrs
2	N6IE+1	27	38	72	33	100	33	43	14	10	2	129	372	43 yrs
3	N3RC	7	26	28	11	71	32	35	7	9	6	98	232	64 yrs
4	K6JS+2	0	17	38	10	78	8	32	1	6	5	92	195	15 yrs
5	K6ANP	4	17	51	3	73	6	27	0	8	7	85	196	76 yrs

**CW**

<b>Rank</b>	<b>Callsign</b>	<b>160</b>	<b>80</b>	<b>40</b>	<b>30</b>	<b>20</b>	<b>17</b>	<b>15</b>	<b>12</b>	<b>10</b>	<b>6</b>	<b>DXCC</b>	<b>Slots</b>	<b>Range</b>
1	N6IE+1	12	22	63	0	85	0	38	0	10	0	101	230	43 yrs
2	K6ANP	0	14	44	0	67	0	27	0	8	0	77	160	76 yrs
3	K6JS+2	0	14	37	0	63	1	32	1	6	0	72	154	15 yrs
4	KC6AWX	5	7	19	2	30	6	6	0	0	0	72	75	33 yrs
5	N6YEU	0	3	16	1	43	3	19	0	0	0	52	85	31 yrs

**SSB**

<b>Rank</b>	<b>Callsign</b>	<b>160</b>	<b>80</b>	<b>40</b>	<b>30</b>	<b>20</b>	<b>17</b>	<b>15</b>	<b>12</b>	<b>10</b>	<b>6</b>	<b>DXCC</b>	<b>Slots</b>	<b>Range</b>
1	K6VXI	0	0	2	0	32	3	14	0	0	0	38	51	10 yrs
2	N6YEU	0	1	11	0	16	2	17	0	2	0	25	49	31 yrs
3	N6IE+1	2	4	3	1	3	6	5	0	0	0	16	24	43 yrs
4	KC6AWX	0	0	1	0	8	0	0	0	0	0	9	9	33 yrs
5	N3RC	0	0	1	0	3	0	4	0	0	0	5	8	64 yrs

**Data**

<b>Rank</b>	<b>Callsign</b>	<b>160</b>	<b>80</b>	<b>40</b>	<b>30</b>	<b>20</b>	<b>17</b>	<b>15</b>	<b>12</b>	<b>10</b>	<b>6</b>	<b>DXCC</b>	<b>Slots</b>	<b>Range</b>
1	KC6AWX	0	17	30	10	79	32	9	1	0	7	139	185	33 yrs
2	N6IE+1	25	28	42	32	63	30	22	14	1	2	108	259	43 yrs
3	N3RC	6	24	18	11	60	32	29	7	8	6	89	201	64 yrs
4	N6AD	1	8	26	4	62	12	18	18	13	5	84	167	25 yrs
5	W6GMP	0	2	11	22	39	14	9	4	1	0	62	102	12 yrs



## REDXA SCORES

### WPX CW

Call	Op	Class	QSO	Prx	Score
KU6F	K6SRZ		1076	508	1,345,692
NB6U	N6ZFO		942	504	994,896
AK6M	K6MM	SOABHP	638	433	516,136
N6TQ	N6TQ	SOABHP	482	290	315,520
WQ6K	N6IE	SOABHP	358	350	294,700
K6RIM	K6RIM	SOABHP	55	327	272,391
N3RC	N3RC	SOABHP	340	239	160,130
K6CTA	K6CTA	SOABLP	11	9	243
W6XU	W6XU	SOABLP	12	12	204

### Soapbox

**K6MM** - "Yes, dear, I'll be there soon"..."Pull weeds? "Sure. Just a few more minutes". Closed the shack door, called CQ and 14 hours later found 600+ Qs and 0.5M points in the Log. Was hoping for more on 15M, but was happy to see 20M, the money band, open late into the evening. Had some great runs on 20M, using a new technique: I just called "CQ AK6M". I figured those around me knew I was in the WPX contest. Everyone else below 14.100 was on FT8:>) Very enjoyable time. Thanks for all the Qs. 73, John, K6MM / AK6M Station: K3 / ACOM 1000 / 2-ele SteppIR / G5RV / N1MM+

**N6ZFO** - Just 200 watts, awaiting amp repair. A somewhat casual effort.

**K6SRZ** - I really hate cut numbers!

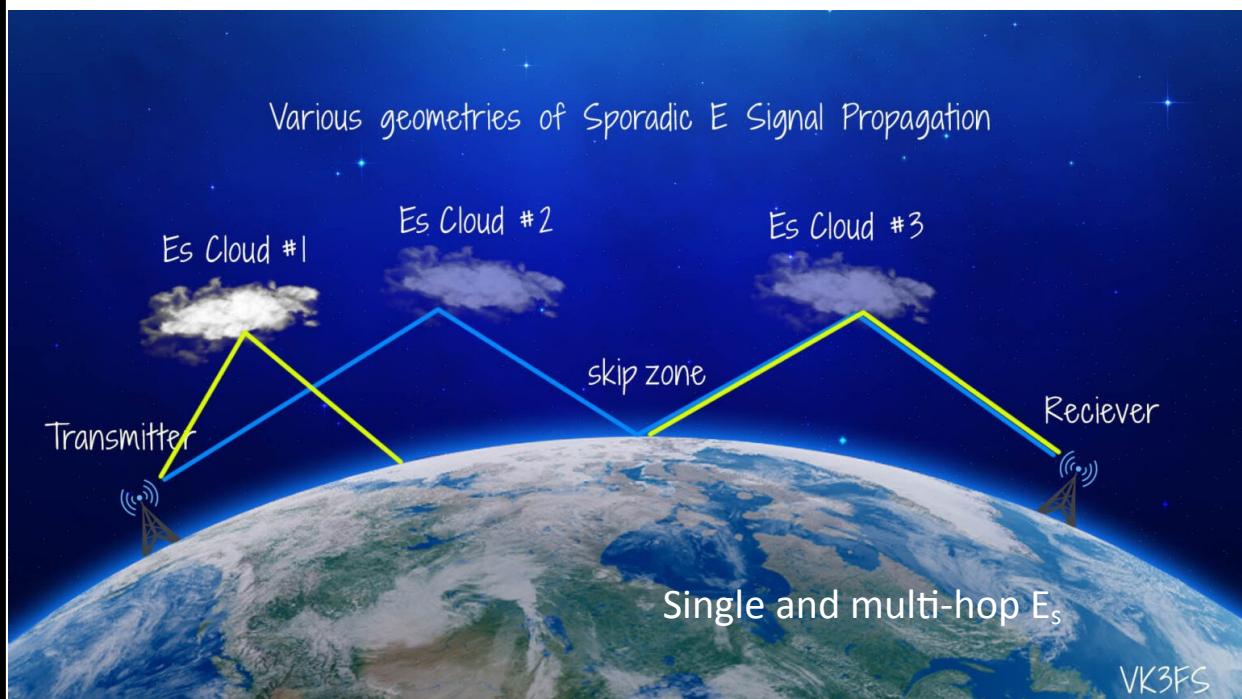
## Treasurer's Report

Beginning balance May 1: \$3,649.16  
Outgo: \$73.00 (p.o.box rental 6 months)  
Income: \$38.24 (4 dues less commission from Square service)  
Ending balance May 31: \$3,614.40

Submitted by Fred/ N6YEU. REDXA Treasurer

## Six meters for beginners

Between May and August in the Northern Hemisphere an ionospheric phenomenon known as Sporadic E or E<sub>s</sub> (E skip) occurs, which allows long distance communication on 50 MHz and higher frequencies. E<sub>s</sub> can also occur on the 10 meter band. Sporadic E results from thin clouds of ionized matter forming in the E layer. These clouds can vary in degree of ionization and in size. Some of the papers I reviewed suggest that E<sub>s</sub> clouds can be as small as a few meters and as large as 200 km. The clouds can drift over the Earth's surface. The clouds occur at altitudes between 80 and 150 km with the result that a signal refracted from a cloud may travel well over 1000 miles. That's what's happening right now (as I type this) with WSJT-X FT-8 on in the background. The real fun starts when different clouds link up with a resultant multi-hop skip. This is what allows DX QSOs of many thousands of kilometers as, for example, K6JS's QSO with 3D2AG in Fiji, a



distance of more than 8700 km.

Why does E<sub>s</sub> occur and why—in the Northern Hemisphere—does it occur when it does? The answer is “nobody knows”. Certainly the Sun must have something to do with it since E-skip in the Southern Hemisphere occurs in late Fall and into Winter (their Spring and Summer)..

Ham radio on the 6 meter band has gotten a boost in recent years for several factors I can identify:

\*many manufacturers now include 6 meters with their transceivers.

\*FT-8 allows error-corrected communication with relatively low power

## Six meters for beginners (cont.)

\*Six meter yagis can be small, looking somewhat like an old time television yagi

\*Amateurs with entry level licenses may use all modes on six meters

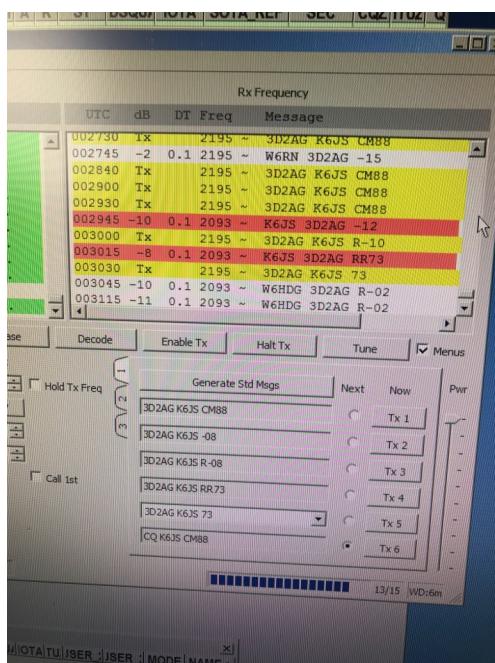
Amateur radio on six meters—and its cousins 4 and 5 meters—have been around for nearly 100 years. For much of that time, six meters had to coexist with broadcast television channel 2, which occupied the spectrum between 50 and 56 MHz. At times, TV broadcast signals would appear on TV sets hundreds—even thousands—of miles away. With digital TV and cable systems this has become a much rarer phenomenon.

The first popular amateur radio equipment for six meters was Faust Gansett's "Gonset Communicator" a crystal controlled, portable (like a small suitcase) transceiver introduced on the pages of QST in 1952. It cost \$189.99. Radio surplus stores had barrels of crystals for Gonset users and for novices working other bands.

I am drawn to DXing on difficult bands such as 160. Since it's approaching summer, 160 meter DX is pretty rare so I've turned my own activities to Six Meters. My 6M WAS stands at 49 (I need Delaware) and DXCC at 17 (the latest being EA8DBM worked also by K6JS and N3RC).

Our club's resident six meter expert is Bob, K6QXY, who does most of his DXing via EME (moonbounce) which, as far as I know, doesn't depend on characteristics of the E Layer.

That's about the extent of your editor's six meter knowledge. There are a fair number of REDXA folks on six meters. Please join us, A simple dipole, 100 watts, and FT-8 are all you need to start filling your log.



A multi-hop E-skip FT-8 QSO between K6JS in Rohnert Park and 3D2AG on Viti Levu, Fiji, a distance of 5450 miles. Jim was running 100 watts to a SteppIR.



## Ham Radio Outlet to Open Sacramento Store

Ham Radio Outlet has announced they will move their Oakland store to [4813 Auburn Blvd, Sacramento, CA 95841](#). Opening in mid June and "located close to downtown (one block away from the former HFE Electronics store) and with easy access from the freeway, HRO Sacramento will proudly serve Northern California and the surrounding area."

For a sneak peek inside the new store go to <https://photos.app.goo.gl/BGG75D8w5z7i7ESP9>

Is this good news? Looks like more driving time for some of us.