

SUNSPOTS

REDWOOD EMPIRE DX ASSOCIATION

P.O. Box 750834, Petaluma, CA 94975

A DX and Contest-minded Amateur Radio Club serving the California coast north of the Golden Gate Bridge

Volume XXII

Number IX

September 2019

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Visit our Web Site at <http://www.redxa.com/>

MEETING ANNOUNCEMENT

Wednesday, September 11, 2019 at Boulevard Café & Grill, Petaluma. If you need directions please call one of the club Officers

6pm— Social Hour in the Lounge
7pm — Dinner and Meeting
8pm -- Program

PROGRAM: Ted Algren, KA6W, on Designing HF Loops for best DX.



REDXA President's Commentary

There's less than a month to go before the California QSO Party kicks off the 2019-2020 contest season on October 5th and 6th. The excitement of the California QSO Party is in the air and the action is on the air! You can sit on one frequency and work QSO after QSO, making hundreds of contacts on phone and/or CW with only the modest of stations.

New contesters can build their confidence searching and pouncing for a while and then try running when you feel more comfortable. Following on the heels of our success at Field Day, REDXA members will once again hit the airwaves in the contest that makes California stations the ones everyone wants to work. For CQP, if you're from California you make the pileups.

Unfortunately, I'll be QRT for CQP this year. My YL Sue turns 60 on October 3rd and CQP weekend tends to fall on her birthday. The last one I missed was when she turned 50 I'm fortunate and lucky to have such an accomodating YL. REDXA won the Small Club category last year with 14 logs submitted (the top 10 logs count for the smll club division) and 1,281,512 points,

Our nearest competitor, the West Valley Amateur Radio Association had 8 logs and 454,646 points. Let's keep the momentum going and get on the air for one of REDXA's premiere events of the year.

Try to clear your calendars and get your chores done so we can once again compete for the top small California club. You don't want to miss the thrill of being in 6-land for the most popular state QSO party on the contest calendar. And even though it's nominally a stateside contest, there are a surpising number of DX stations participating. It's just too much fun to miss. There are plenty of opportunities for portable or mobile operations too. If you're so inclined, a field day style effort to one of these counties can provide you with 24 hours of contesting fun. Last year, Alan, K6SRZ, coordinated a group effort from the "rare" Mendocino County with a field day style operation. Everyone had a lot fun. Check out the CQP website at www.cqp.org. You will find a ton of information, including the history of the event, FAQ's, free software, past records and results.

I hope you all enjoyed our SOTA presentation by Jordan WC6J. During the doldrums of the bottom of cycle 23 Jordon's presentation inspired me to start working the SOTA stations. I've also started working the IOTA DXpeditions. IOTA DXpeditions are real DXpeditions, but on a smaller scale. They usually aren't the big, mega DXpeditions with \$500,000 budgets, but they have the same logistics. They still have to charter vessels to get them and their equipment to the island and have all the challenges, if not more, than the big DXpeditions have to deal wit

We have some great presentations on the horizon. This month, our program will be on Designing HF Loops for

Best DX by Ted Algren, KA6W.

In October we'll have Eric WA6HHQ from Elecraft doing a K4 presentation!

November brings us N6SJ Steve Jones with a presentation on CW Skills for DXing.

I hope to see you all at the next meeting.

73,

Jim, K6JS



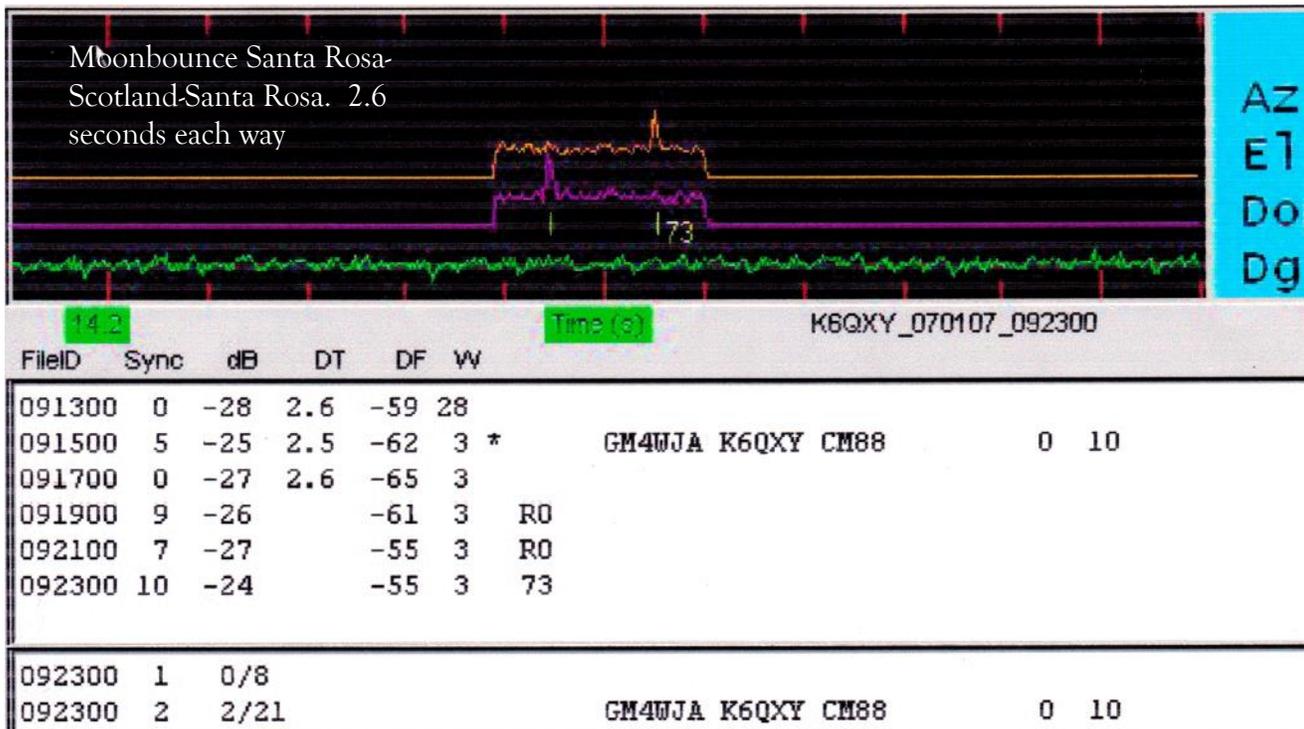


EME's classical Roots

This month's "Sunspots" features observations of Moon Bounce or EME operation and visits to our two local practitioners of the art, Bob K6QXY and Josh, W6XU.

Above: Diana, Goddess of the Moon and of the hunt. She leant her name to the US Army Signal Corps first successful EME experiments at Ft. Monmouth on January 10, 1946.

Below is a trace of a moon bounce QSO between K6QXY and JC Fraser, GM4WJA (Scotland).





The first ham radio satellite

Diana, Goddess of the Moon and of the hunt. She's often seen accompanied by her dogs.

In 1946 the US Army Signal Corps conducted the first successful EME (earth moon earth) transmission using WWII standard radar equipment. The project was code-named "Diana". Col. John DeWitt, himself a ham, led the effort.

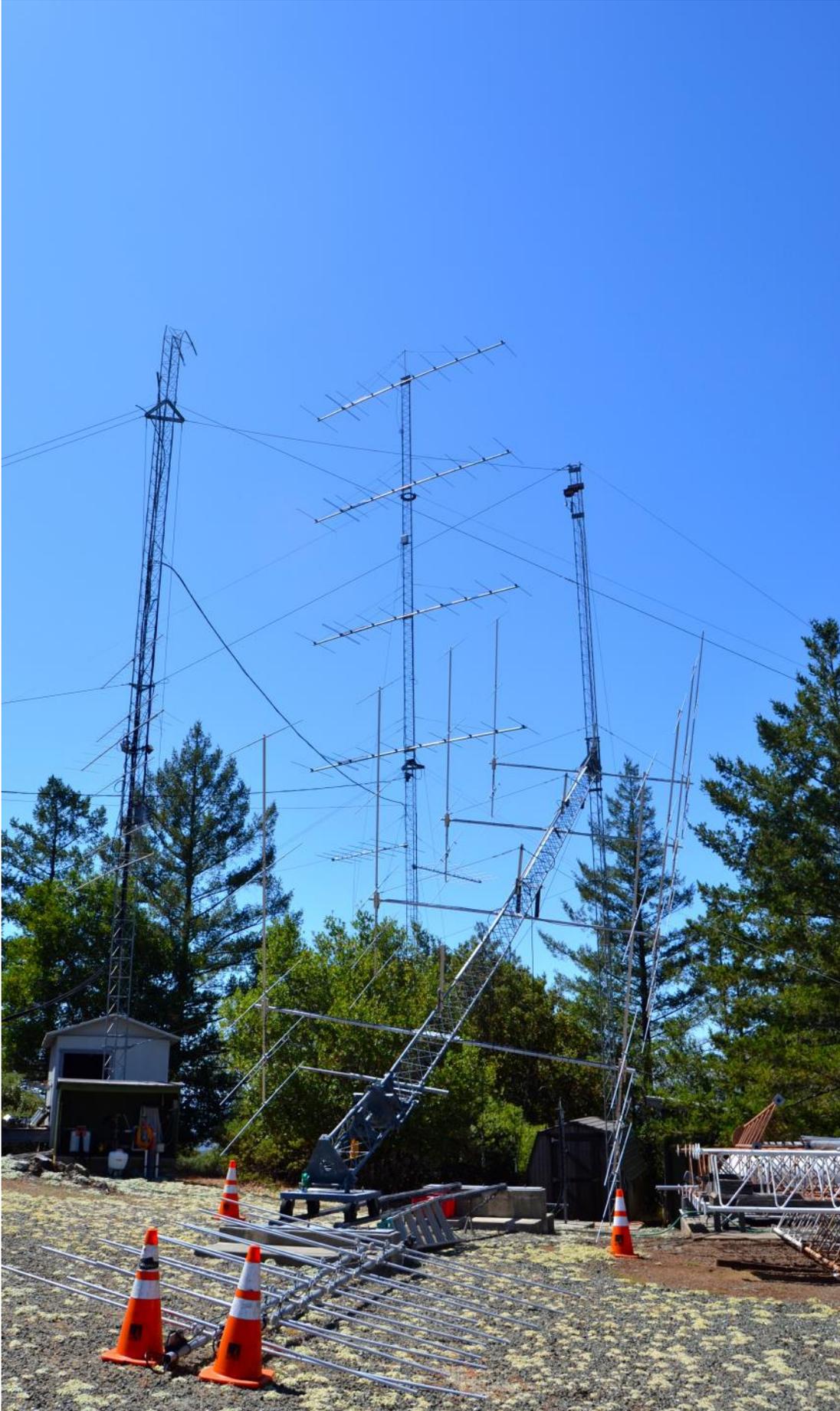
The Signal Corps was most interested in determining whether or not EME could be a reliable means of satellite communication to be used when HF conditions became unreliable. It was an idea that was first proposed in the 1920s.

Project Diana became history when EME was replaced by earth orbiting man-made satellites. Hams performed the first successful EME QSOs in 1953. Today, EME is largely confined to ham radio (as far as we know).

REDXA is fortunate to have two practitioners of EME, Bob, K6QXY and Josh, W6XU. Bob has a staggering total of 183 confirmed DXCC entities with EME.



"Gonna buy five copies for my mother..." K6QXY on the cover of CQ Magazine. Bob has made several first-time-ever 6 meter EME QSOs, including OZ, VK, PA, and KP2. His 6M EME DXCC total is 183.



Part of the K6QXY antenna farm. In the foreground is the track on which the base of the antenna moves to change elevation. All EME QSOs require settings for azimuth and elevation.

Bob's QTH can sometimes be visited by 100 MPH winds. Antenna repair is a constant chore.



Above: Coax, including hardline, and control cables exiting the K6QXY operating position.

Left: VHF and UHF antennas on Bob's commercial towers. Clients rent space for public service organizations and for ham and commercial radio repeaters,. KQED uses the tower for one of it's relays.

Below: One rack of equipment for Bob's commercial clients.





Top: PG&E doesn't want you to climb their towers.

Despite the close proximity of PG&E transmission lines, K6QXY is free of direct interference.

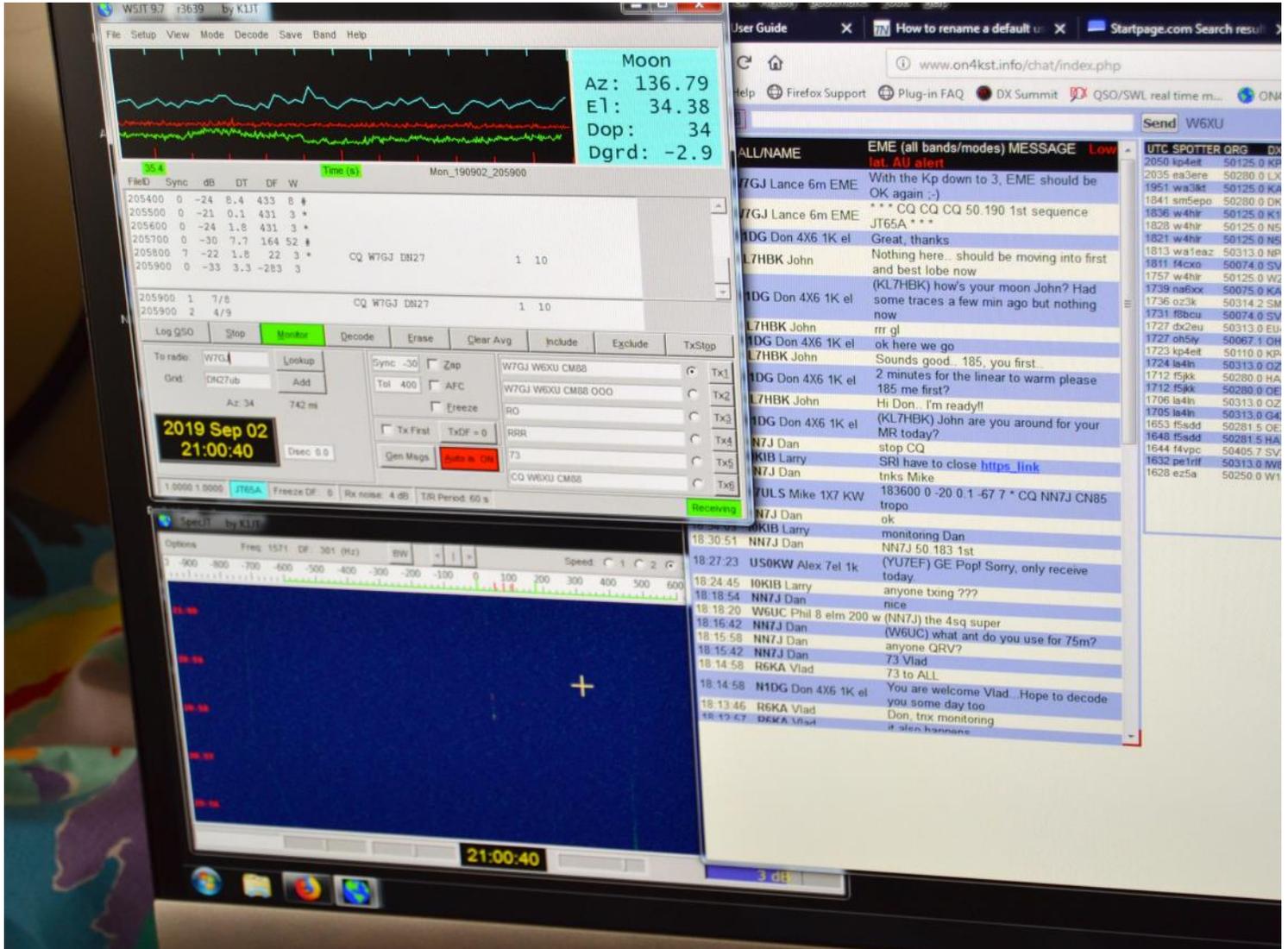


Lower: another view of the K6QXY EME array showing the tracks that move the base of the tower to change its elevation.



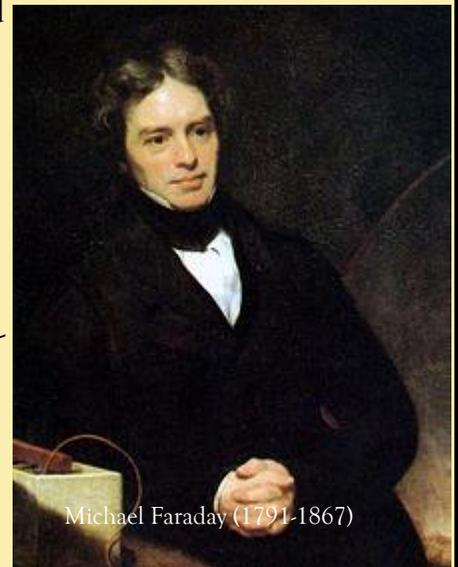
Josh, W6XU, demonstrating EME for your editor. It looks like he's using a microphone, but that's just an artefact of the camera angle. The mode was JT-65 and the QSO was with W7GJ in Montana.



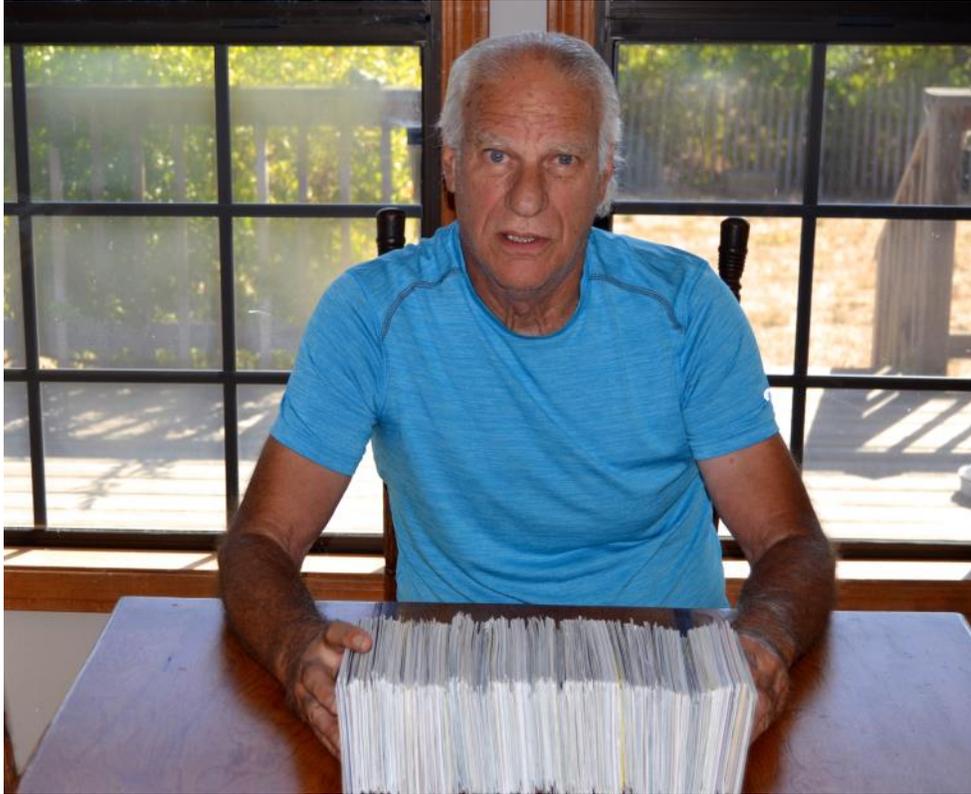


Above, a JT-65 EME QSO between W6XU and W7GJ (Montana) using WSJT software. The faint white vertical trace against the blue background is the W7GJ signal. The Moon is between 225,623 and 252,088 miles from Earth, depending on the relative position of its and Earth's orbit. At the speed of light, it takes between 2.42 and 2.71 seconds for a signal to make the round trip. EME signals are subject to changes in polarity ("Faraday" in EME-speak) and to slight doppler shifts, all of which influence reception.

Faraday rotation occurs when a linearly polarized signal passes through the ionosphere. When the electromagnetic wave interacts with the charged particles and the Earth's magnetic field, its plane of polarization is rotated. When the rotated signal has been reflected back from the moon and re-enters the ionosphere, it will be rotated further in the same direction - Faraday rotation does **not** "un-wind" or cancel out! This means that Moon echoes can return rotated by 90°, and not be heard. In these conditions, EME QSOs between stations anywhere in Europe with fixed horizontal polarization will be very difficult.



Michael Faraday (1791-1867)



めいし			
め 1 ↓	い 2 ↘		
し 1 ↓	し 2 ↘		
し 1 ↓			

Meishi represented in Hiragana, one of the three most used Japanese alphabets. Hiragana is often used for words that have no counterpart in the traditional Kanji (Chinese characters).

Can I blame Meishi? Meishi (business cards) are essential in Japan. The cards contain one's name, company's name, job title, company address, phone number, email address and so on. They are exchanged when two people meet for the first time in a business context. It's definitely a male thing, and my own hypothesis is that this is why so many Japanese hams continue to send paper QSL cards even in the face of the larger trend to use LOTW.

When I was in Visalia, the representative from the Sixth District QSL Bureau mentioned to me that I had some cards waiting for me and if I sent money for postage he'd send them to me. And he did. Above pictured are some of the more than 1,000 cards that arrived in a priority mailer box.

Fully 90+ percent were from Japan. Germany was a distant second. The dates stretched back to 2004. Some were simple computer-generated cards and others featured photography. The most popular picture was of Mt. Fujiyama followed by photos of the *shinkansen* (bullet train) and of the operator's family. The most popular animal pictures were of dogs with cats in second place. Some operators sent cards every year confirming band-mode contest QSOs that had already been confirmed many times over.

Perhaps the time is ripe for the JARL to appeal to their members' environmental consciousness and put the brakes on Meishi as it applies to QSLs. The trees will thank them. —ed.



Like your editor, JK1EIL is a ham who raises Guide Dogs. The major Japanese Guide Dogs training facility is in Sapporo on Hokkaido Island.



Another QSL card paying homage to DU7SV's iconic card including the original



green background.



Go ahead and try to parse the message on this card!

JH1KMC

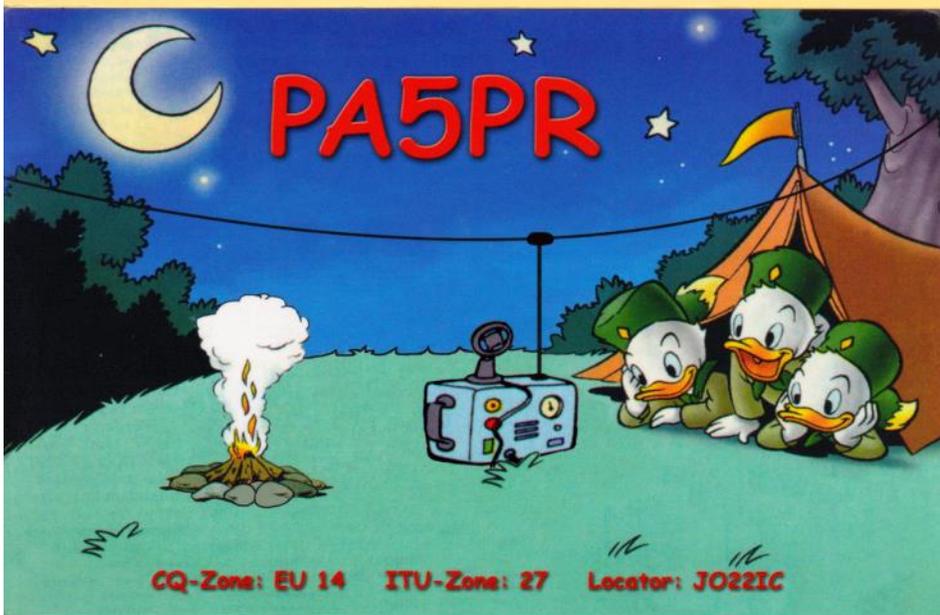
DXCC(CW) JAG#355



Yassy OUCHI

3-11-4-301 Kohokudai Abiko
Chiba 270-1132 Japan

Based on my unofficial review of the huge stack of QSLs I just received from the Bureau, dogs are more popular on Japanese QSL cards than any other species.



CQ-Zone: EU 14 ITU-Zone: 27 Locator: JO22IC

Disney's influence is universal. Here are Huey, Louie, and Dewey as Junior Woodchucks on a QSL from the Netherlands. The late Carl Barks was the Disney artist who actually created Duckburg and its inhabitants.

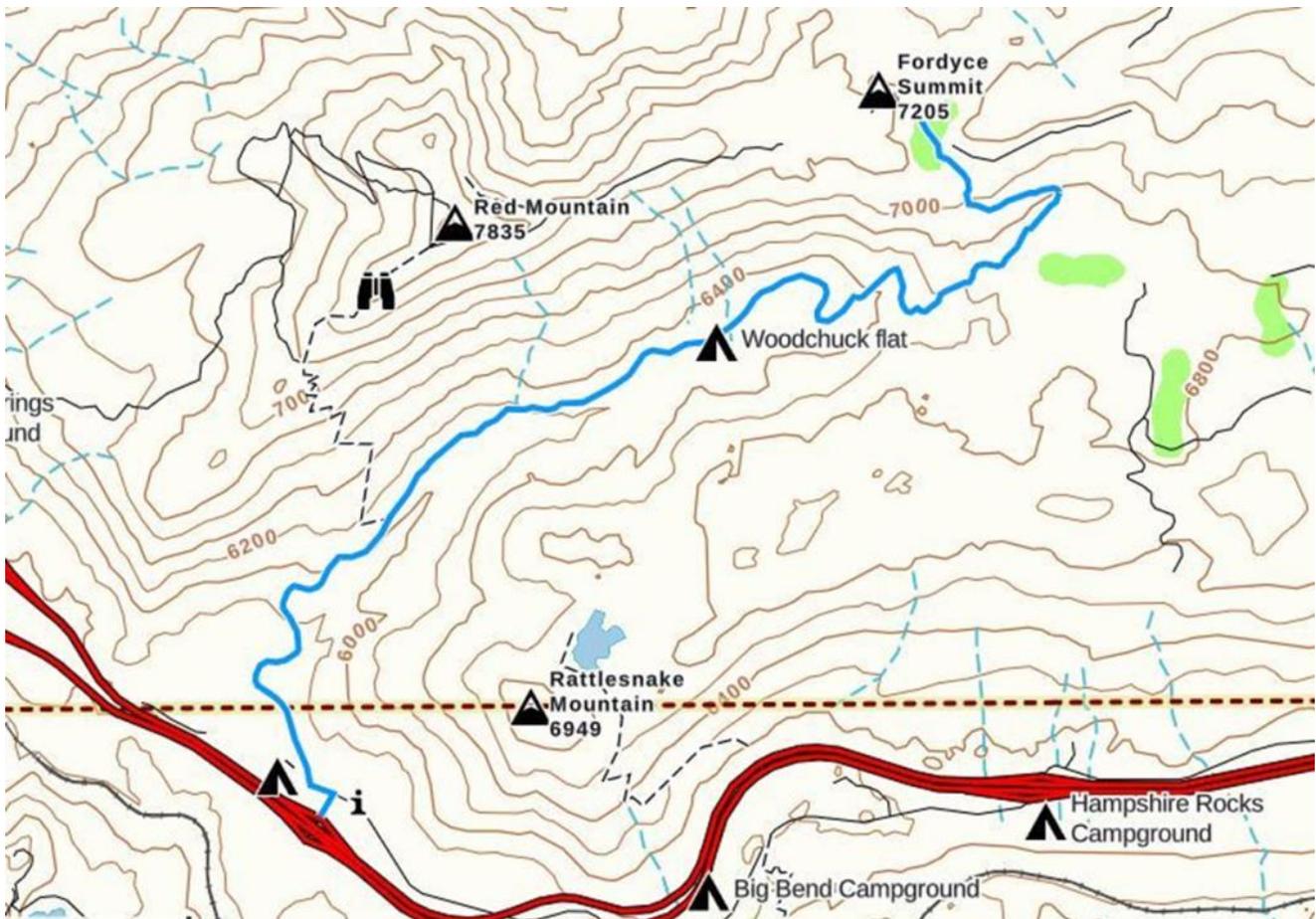
Jordan, WC6J, was our guest speaker at the August REDXA meeting, describing the Summits of the Air (SOTA program). Joe, AA0BV, sent links to his blog that shows maps, photos, and commentary from one of his recent Summits on the Air (SOTA) expeditions. The SOTA presentation was an eye-opener for your editor, who had thought that putting a summit on the air was simply a matter of lugging gear up to a mountain and getting on the air. In fact, SOTA has a proscribed list of criteria for recognizing an expedition. The topographic maps and photos on this and the following page are excerpted from Joe's blog.

You can learn more about SOTA from the Web site <https://www.sota.org.uk/>

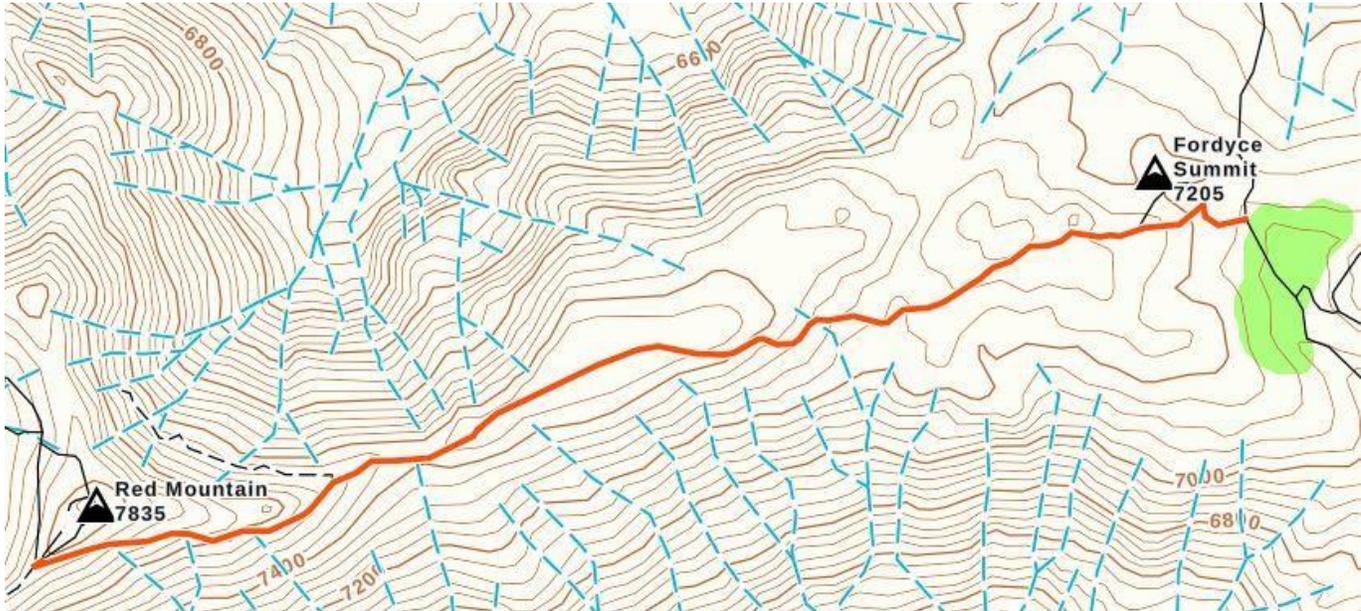
Signal Peak W6/NS-179

Ed – W1EJ and I activated Signal Peak W6/NS-179 on July 25, 2019. For me this was quite an adventure. From Sonoma County the drive is approximately 360 miles round trip. We left at 6:00 AM (Local) and arrived home at 3:30 PM (Local). Traveling from wherever you are take I-80 to Cisco Grove. There is a gas station at this exit and we always fill the tank before heading into the mountains.

The map below shows the route from I-80 to Fordyce Summit. "Red Mountain" at 7835' is shown Signal Peak at 7841' is adjacent.

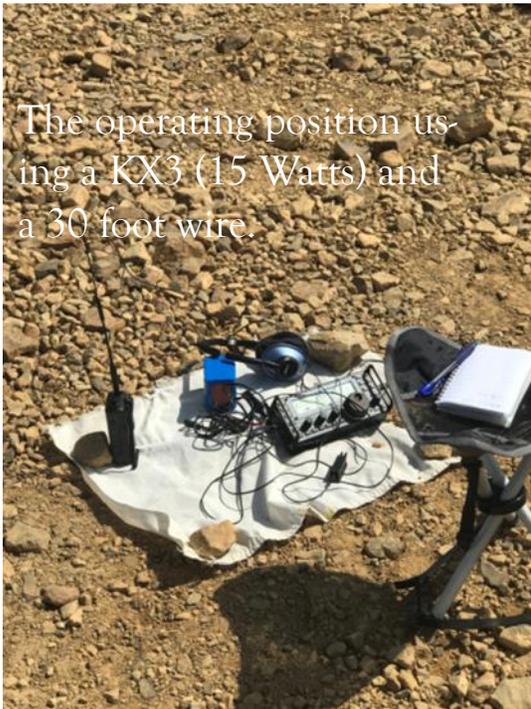


The next section of the road (?) from Fordyce Lake Road to the Signal Peak Summit requires a 4WD vehicle with a skillful 4WD driver. If you are new driver I suggest you practice on other summits!

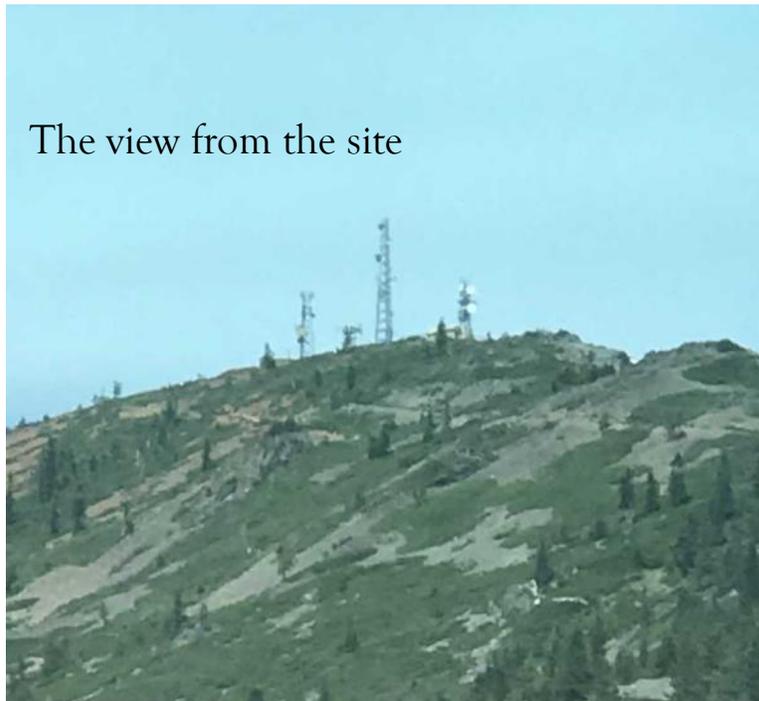


This portion of the drive is 1.8 miles with 715' ascent – this road is VERY rough and once you get half way there is no place to turn around and no place for vehicles to pass one-another. And as you can see from the slope for much of this drive you are on the edge of a very steep slope!

For the purists who like to hike there is a trail. 1750' ascent in 1.8 miles – about an 18% gradient – that seems quite steep to this old man!



The operating position using a KX3 (15 Watts) and a 30 foot wire.



The view from the site

AUGUST MEETING MINUTES

by Doug WW6D, Secretary

President Jim Selmi, K6JS, called the meeting to order at 7:48 pm, August 14, 2019 at the Boulevard Cafe, Petaluma, CA. In attendance were 20 members and guests.

Guests included Paul Hansen, W6XA who is one of our charter REDXA members, along with his YL Joann. Guest speaker Jordan Heichman, WC6J and his YL Susan, KM6NFP were also introduced who made the long drive from Placerville.

Minutes from the previous meeting were approved as published in Sunspots. Treasurer's report was presented orally and approved.

Old Business. None.

New Business. It was moved and seconded to contribute \$250 to the Northern California DX Foundation as our annual contribution.

Jim ran down the list of upcoming programs:

Sep 11: Ted Algren, KA6W "Designing HF Loops for Best DX"

Oct 9: Eric Swartz, WA6HHQ "Latest News from Elecraft" (including K4 Xcvr)

Nov 13: Steve Jones, N6SJ "CW Skills for DXing"

Dec 11: Holiday Party and Raffle

Kudos were acknowledged for club members Bob K6QXY and Adam KD6POC in helping fellow club member Ron AF6MO with his station and antennas.

Program was presented by Jordan WC6J on the Summits On The Air (SOTA) program. He highlighted the various aspects of the program and the operating aids that help both the "Activator" and the "Chaser". Jordan is the Northern Sierra Nevada Regional Manager for Summits on the Air and he has been an avid Activator for many years. He regularly operates portable from remote mountaintops using phone and CW. Jordan often experiments with building radios and antennas for portable use. He is also the current Vice President of the El Dorado County Amateur Radio Club.

The raffle sales netted \$43 to the club and \$42 to yours truly WW6D.

Adjourned at 8:42 pm.

REDXA Calendar of Upcoming Events

by Doug WW6D

Sep 11 * *REDXA Monthly Meeting*

Sep 14-16 ARRL September VHF Contest

Sep 28-29 CQ WW RTTY

Oct 5-6 California QSO Party

Oct 9 * *REDXA Monthly Meeting*

Oct 18-20 PACIFICON

Oct 26-27 CQ WW SSB

Nov 2-3 ARRL Sweepstakes CW

Nov 13 * *REDXA Monthly Meeting*

Nov 16-18 ARRL Sweepstakes SSB

August Treasurer's Report

Beginning balance. \$3685.35

Receipts.

Raffle. \$43.00

Dues. \$45.00

total \$88.00

Expenses

Field Day repair receipts \$43.59

Guest Speaker and spouse. \$50.00

Paid per Jim. < \$93.59 >

August ending balance. \$3679.76

Terry Tinagero

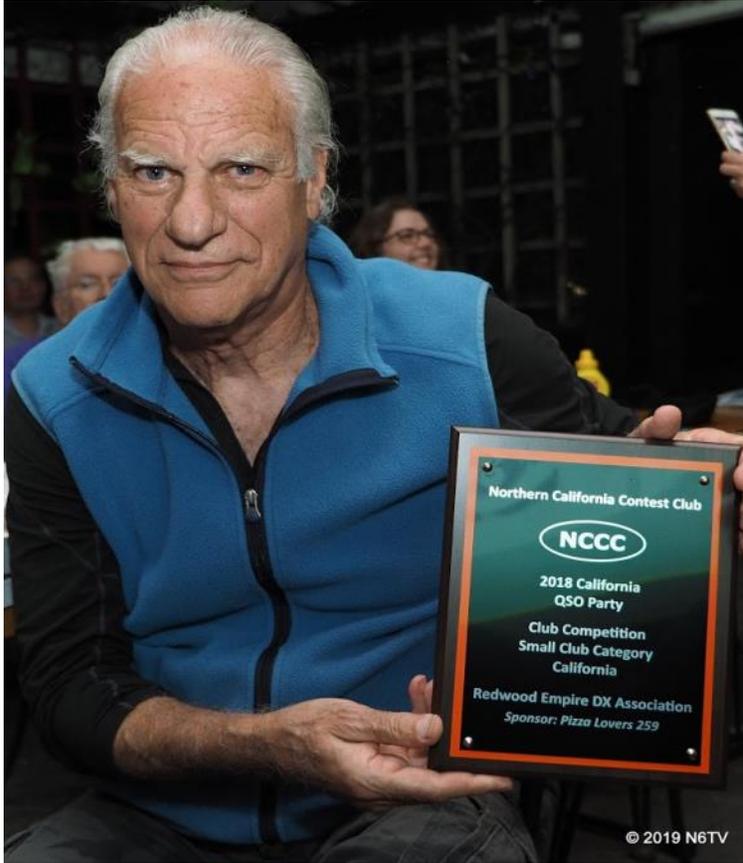
K6TER

Semper Fi





At Visalia, L to R : Marilyn, N6VAW, Dianna, WA6CLK, and Sylvia, K6ANP's XYL (drinking *Menage a Trois*) credit N6TV



October: the good

The California QSO Party—the premier state QSO party with world wide participation—happens on first weekend of October . Last year, REDXA took first place among small club entrants. We can do it again if enough of us get on the air. REDXA members represent at least seven Northern California Counties.

...and the Bad

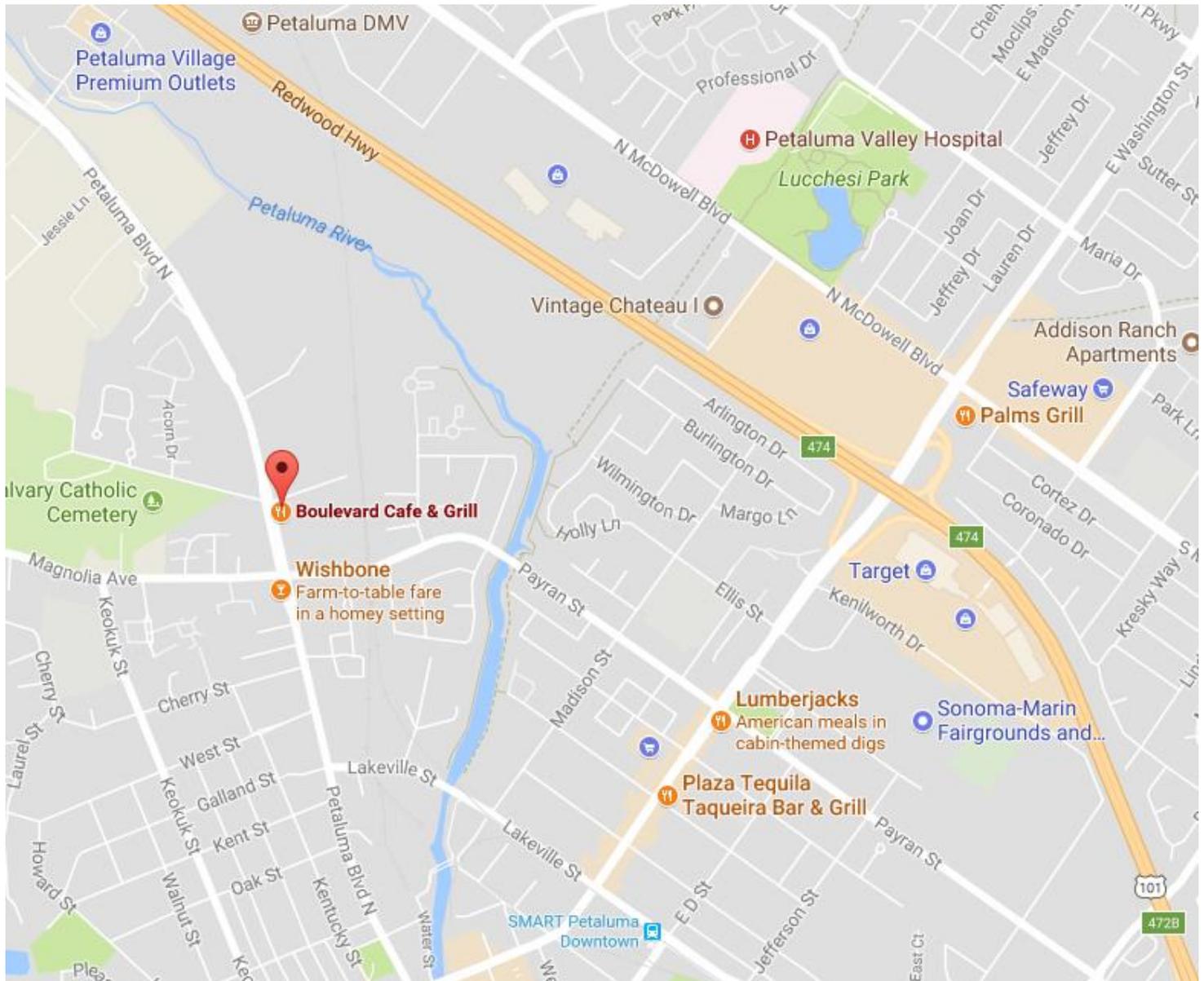
On the same day that the 2017 CQP ended, a wildfire swept over the hills and into Santa Rosa where thousands of homes were destroyed. Three of those homes belonged to REDXA members. The tangled wreckage shown below is a remnant of WX6B's home and antenna farm. Rebuilding is underway. Bill should be back on the air soon.





Boulevard Café & Grill

1096 Petaluma Blvd. North,
Petaluma, CA



Redwood Empire DX Association meets the second Wednesday of each months at the Boulevard Café and Grill at 1096 Petaluma Blvd. North. Petaluma, CA.