



# RF



ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. LXIII NO. 03

P.O. BOX 3454, TUSTIN, CA 92781

March 2022

## The Prez Sez...

By Nicholas AF6CF



A man of action at March 2022 Board Meeting.

Hello! March is here, and we have great news for all the Club members. And **Dues are now due**, so if you have not yet renewed, please do so now. We need everybody's support to keep the club running with low fees.

Field Day preparations are starting, with a couple of meetings planned to hear ideas and input from everyone. The Board has chosen the Field Day Chair Persons and they are starting the planning process for this activity. As usual, we will start a donations Fund for rent and gas so it will (hopefully) attain its goal.

We have open positions for Band captains, and plan to talk to other clubs to see about some joint effort. Many positions are open, so hurry up to volunteer.

We will be working to secure a FD Site and just like this year at the winter activity my prediction is that we will have a great time, propagation or not. The two co-chairs will be doing work organizing the event, and scheduling training for the not-so-skilled operators.

As usual, we will be having a few members participating in Baker to Vegas this month and other radio related events to make our Club one of the most active in the region.

This month's speaker, Brenda Emrick, will talk about Emergency Financial First Aid and Planning for Personal Disaster Recovery. This is a very interesting subject, so make sure you show up at the General meeting. Mark your calendars early! I look forward to an eyeball contact with you all at the next General Meeting.

73 DE AF6CF

## NEXT GENERAL MEETING

March 18, 2022

Join us via ZOOM at 19:00 Hrs.  
Current OCARC members will  
receive an email with  
instructions. Early check-in  
available at 18:30 Hrs. (+-)

Speaker:

**Brenda Emrick,  
Costa Mesa**

**Fire Protection  
Specialist/Comm. Ed.**

Presents:

**"Emergency Financial First  
Aid and Planning for  
Personal Disaster Recovery"**

## NEXT BOARD MEETING

Saturday, April 2, 2022

### SPECIAL NOTICE:

During the COVID-19 pandemic All  
OCARC Nets will Remain Active!

See page 2.

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### 2022 Board of Directors:

#### President:

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#### Vice President:

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#### Secretary:

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#### Treasurer:

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Tim Millard, N6TMT  
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[n6tmt@w6ze.org](mailto:n6tmt@w6ze.org)

### 2022 Club Appointments:

#### W6ZE Club License Trustee:

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(714) 348-1636  
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Tim Millard, N6TMT  
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[n6tmt@w6ze.org](mailto:n6tmt@w6ze.org)

#### ARRL Awards Appointees:

Arnie Shatz, N6HC  
(714) 573-2965  
[N6HC@aol.com](mailto:N6HC@aol.com)

John Schroeder, N6QQ  
(West Orange Co.)  
(562) 404-1112  
[N6QQ@msn.com](mailto:N6QQ@msn.com)

### Monthly Events:

#### Membership Meetings\*

Time: 7:00 PM  
When: 3<sup>rd</sup> Friday of each Month

**\*See ZOOM announcement pg.1**

#### Board Meetings

February 05 at 8:15 AM

*New physical location coming soon*

**\*\* Board will handle Club business by ZOOM at this time**

#### Club Nets (Listen for W6ZE):

**10M: 28.375 ± MHz SSB**

Wed- 7:30 PM - 8:30 PM

Net Control: Corey, KE6YHX

**2M: 146.55 MHz Simplex FM**

Wed- 8:30 PM - 9:00 PM

Net Control: Corey, KE6YHX

**75M 3.883 MHz LSB**

Tue @ 8:00 PM

Net Control: Corey, KE6YHX

#### CATALINA AMATEUR REPEATER ASSOCIATION (CARA)

**147.090 MHz (+0.600 MHz) No PL**

Monday - Friday

9:00AM and 9:00PM

Prg. Director. Tom W6ETC

### **OCARC 2022 DUES**

#### **Membership period is:**

**1 January to 31 December**

Individual New or Renewal:	\$30.
Family New or Renewal:	\$45.
Teen New or Renewal:	\$15.

**New Member Dues are prorated quarterly and includes a badge:**

Additional Badges: \$ 3.

Use one of our interactive online forms to calculate current prices, join the club and/or order badges:

#### **Online Forms / Dues & Badges**

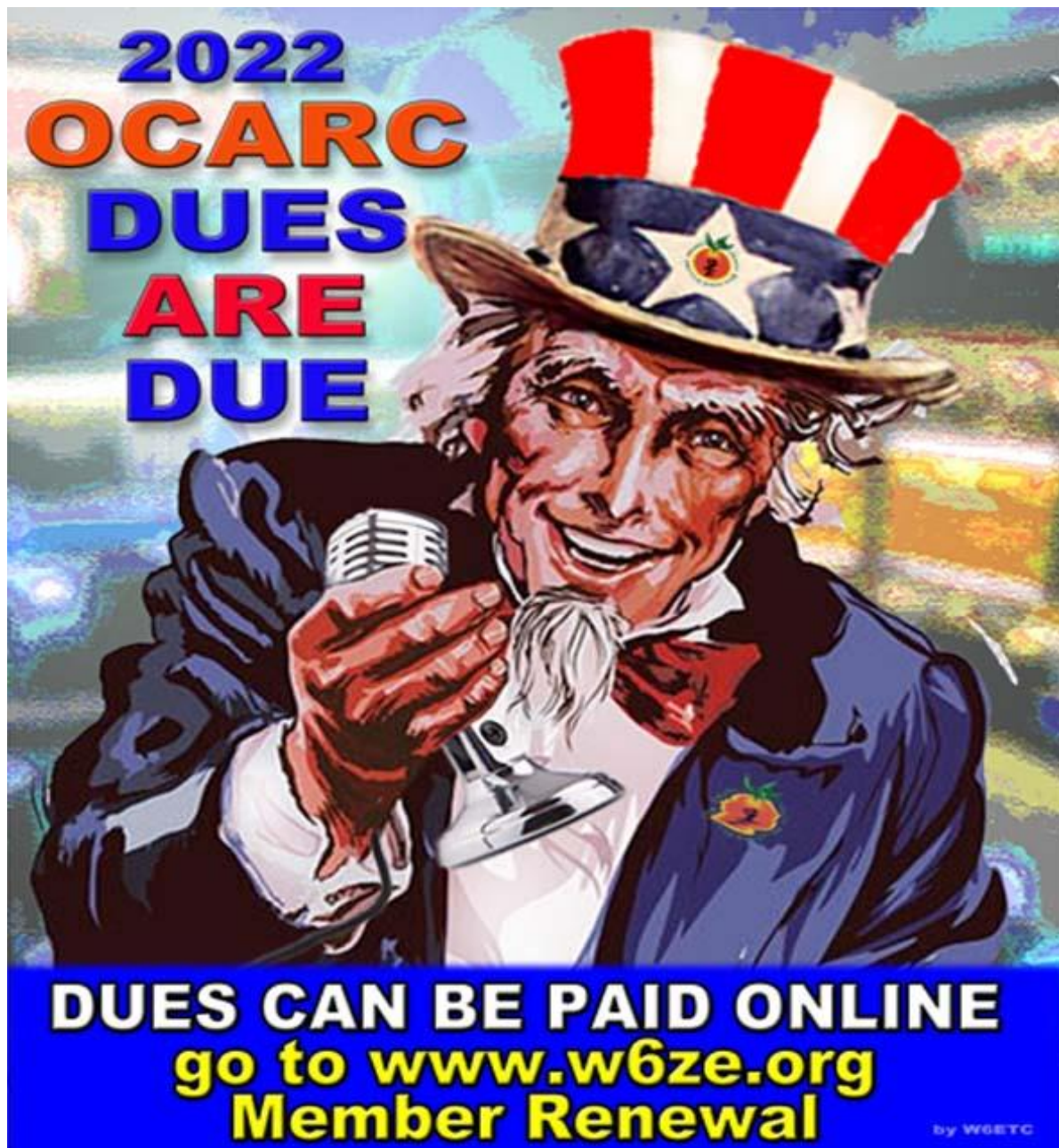
<sup>•</sup>\$3. plus mailing costs if applicable  
*Dues are subject to change without notice*



## OCARC 2022 Membership Dues are DUE by March 31 !!!!!

If you have NOT already renewed your club membership, then due it NOW.

Don't lose your club membership and privileges!!!



Adult Renewal:  
Teen New or Renewal:  
Family Renewal:

\$30.00 for the full year  
\$15.00 for the full year  
\$45.00 for the full year

## CA QSO PARTY SILVER GOES TO W6WG

### MULTI-OP, SINGLE-TRANS, LOW POWER



CAQP results are now released and W6WG, a team of OCARC operators, scored over-all California second in class and first in class for Kern County. Congratulations to the team captained by Ron Mudry W6WG and assisted by Tom Culhane KA9FRH, and Jim Schultz AF6N.

The contest station was located in the quiet Kern County desert and was operated remotely from Ron's garage in Huntington Beach. The ham radio, state of the art, remote station has been a project of Nicholas AF6CF, Ron W6WG, and Tom W6ETC and was a real contesting pleasure. It was a rare experience to be a desired "DX" station rather than just another Californian. The station, the camaraderie of the group, as well as the hospitality of Ron and Jodi made for a really fun weekend.

#### **OCARC was well represented by eight individual home and/or portable operators.**

Chip K7JA/6 – 85,500, Willy N6OKU – 64,900, Doug K6PGH – 13,500, Tim N6GP – 13221, Allan KN6KOR - 6160, Don N6XBP – 1178, Dan KI6X – 1040, Vijay NA6VJ – 14

Allan KN6KOR, who operated portable commented: *"The 2021 CQP was the first time I participated in the event. I operated portable from Mile Square Park for a few hours. My setup was the ICOM 7300 with a 40m/20m linked dipole. I enjoyed getting on the air to make many contacts in California and other states as well"*

Willy N6OKU, who operated from home, ably assisted by his pretty granddaughter Sophia, commented: *"CQP is one of my favorite contests. This year I enjoyed having my granddaughter Sophia with me in my shack."*

**One and all, we enjoyed the event and look forward to repeating in 2022.**





Tom, Ron &amp; Jim - Hard at it?



Willy &amp; Sophia at the rig.



Tom racking up the points !



Jim – All Play and No Work!



KN6KOR - Mile Square Antenna



Tom – Scoring One-Handed!

## CQP 2021

## Top 10: Multi-Operator Single-Transmitter Low Power

Place	Callsign	QTH	CW QSOs	PH QSOs	Mults	Score
1	W6TCP (W6TCP, KX7M, W6NV ops)	ALAM	1,003	393	57	216,315
2	W6WG (W6WG, AF6N, KA9FRH ops)	KERN	564	13	55	94,490
3	K6QLF (WQ6X, W6QLF ops)	ALAM	316	91	44	49,720
4	NN6P (N7ZTR, ND6O ops)	BUTT	0	453	52	47,112
5	KG6LHW (KG6LHW, KN6NSK, KN6CEH ops)	HUMB/ SISK/ DELN	0	303	46	27,876
6	N6OOA (NK6M, AE6J ops)	CALA	0	173	48	16,608
7	K6AQL/M (K0DI op)	MONT	128	0	41	15,744
8	K6AQL/M (K0DI op)	COLU	132	0	39	15,444
9	K6AQL/M (K0DI op)	TULA	100	1	43	12,986
10	K6AQL/M (K0DI op)	KING	101	0	39	11,817

Class Ranking – W6WG Second Overall !

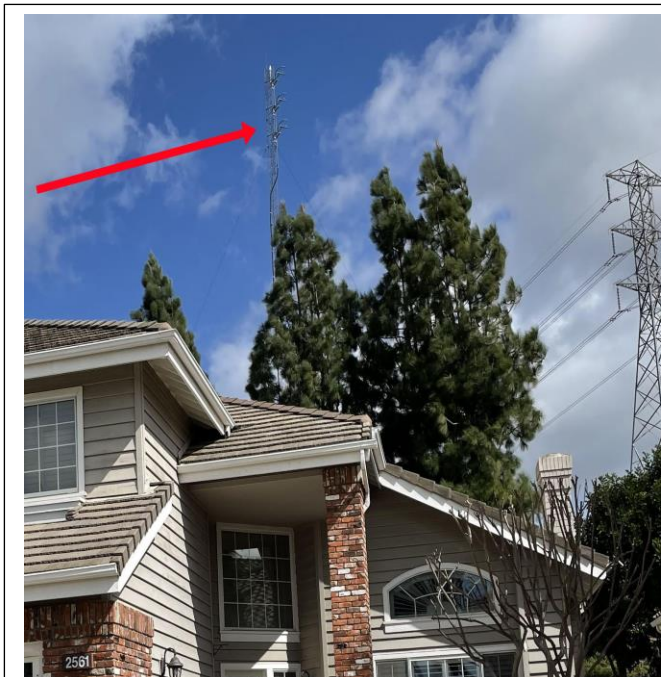


Stocked up and waiting for CAQP 2022!

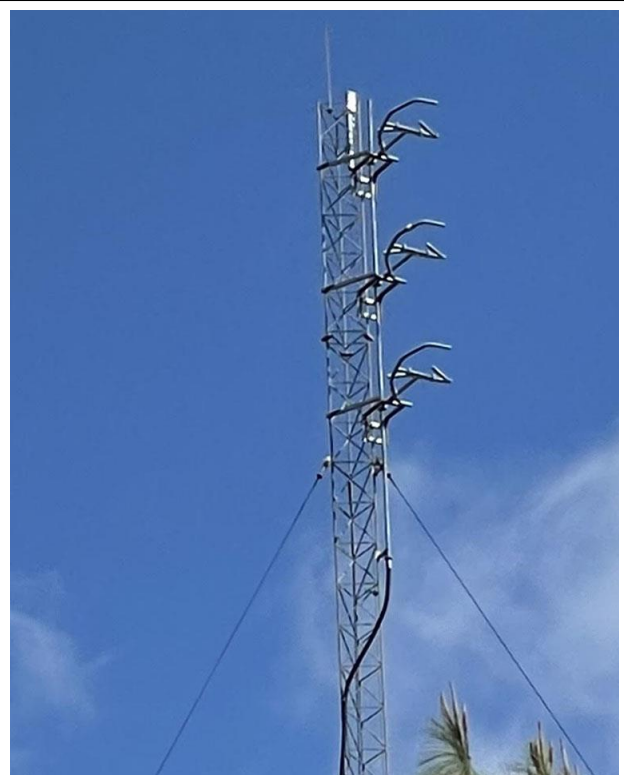
**Can Anyone Identify the Purpose of  
this Tower/Antenna in Hills of Orange?  
(on SCE-Edison Right-of-Way)**

**by Ken W6HHC**

Sometime in the last two months, I started to notice a tall tower on the Hills of Orange above Villa Park as I drive on Bond and Hewes near my home. So last Saturday, I took a drive up Meats following the Edison huge power transmission lines and towers going up the hills of Orange. Finally, on a street just a couple of blocks off Via Escala in the hills of Orange, I was able to take the following pictures of a mystery tower and the antenna. [Note – it is great always having an **iPhone/Camera** on me when I drive].



**Fig 01 – the mystery tower appears to be installed on the right-of-way of SCE?**



**Fig 02 – Close-up of details of the mystery antenna construction.**

The tower/antenna sits behind the backyard property wall of the house shown in **Fig 01**. It appears to sit in the right-of-way property of the huge Edison towers? I know that the tower is new because this house is located next door to a friend of mine that I last visited before COVID shutdown...and it was not there before COVID shutdown. [BTW – my friend has since moved away and knows nothing about the tower.]

**Fig 02** shows some of the tower/antenna in more detail. The tower is NOT a crank-up tower like a ham would typically use. It is a guyed stackable construction that might be tilted up...or assembled in-place? I suspect this antenna is installed for a commercial purpose?? Even when looking at the antenna details blown up, I cannot even determine which type of antenna design I am looking at???

If you have some knowledge (or even suspicions) of the antenna construction or the purpose. Please let me know by e-mail or on the club 10M or 2M nets.

**BREAKING NEWS** – One week later at COAR breakfast Arland W6ACM, reported that he could see the tower from his home and “google-mapped-it” to learn that it is FM Broadcast station **KFSH – 95.9 MHz**.



## RadioActivity

### March 2022

- **New Mexico QSO Party:** 1400 UTC April 9 to 0200 UTC Sunday April 10
- **Georgia QSO Party:** 1800 UTC April 9 to 0359 UTC and 1400 UTC to 2359 UTC Sunday April 10
- **North Dakota QSO Party:** 1800 UTC Saturday April 9 to 1800 UTC April 10

#### Upcoming Activities:

##### MARCH

- **Russian DX Contest:** 1200 UTC Saturday March 19 through 1200 UTC Sunday March 20
- **\*CQ WW WPX / SSB:** 0000 UTC Saturday March 26 through 2359 UTC Sunday March 27

##### APRIL

- **ARRL Rookie Roundup, SSB:** 1800UTC to 2359 UTC April 10
- **10-10 Int. Spring Contest, Digital:** 0001 UTC April 23 to 2359 UTC April 24

\* Indicates club entries are accepted

\*\* Indicates team entries are accepted

Note: When submitting logs for ARRL Contests indicate your club affiliation as "Orange County ARC"

#### State QSO Parties:

- **Oklahoma QSO Party:** 1500 UTC Saturday March 12 to 2100 UTC Sunday March 13
- **Idaho QSO Party:** 1900 UTC Saturday March 12 to 1900 UTC Sunday March 13
- **Wisconsin QSO Party:** 1800 UTC Sunday March 13 to 0100 UTC Monday March 14
- **Virginia QSO Party:** 1400 UTC Saturday March 19 to 0400 UTC Sunday March 20 and 1200 to 2400 Sunday March 20
- **Louisiana QSO Party:** 1400 UTC April 2 to 0200 UTC Sunday April 3
- **Mississippi QSO Party:** 1400 UTC April 2 to 0200 UTC Sunday April 3
- **Nebraska QSO Party:** 1300 UTC Saturday April 9 to 0100 UTC Sunday April 10 and 1300 to 2200 Sunday April 10

#### Repeating Activities:

- **Phone Fry:** Every Tuesday night at 0230Z to 0300Z
- **SKCC:** Weekend Sprintathon (Straight Key CW) on the first weekend of the month after the 6<sup>TH</sup> of the month. 1200 Sat. to 2359Z Sunday.
- **SKCC:** Sprint (Straight Key CW) 0000Z to 0200Z on the 4<sup>th</sup> Tuesday night (USA) of the month.
- **CWops:** Every Wednesday 1300 UTC to 1400 UTC 1900 UTC to 2000 UTC and Thursday 0300 UTC to 0400 UTC
- **K1USN Slow Speed Test:** (CW, 20WPM Max.) Every Friday 2000 UTC to 2100 UTC  
Every Sunday night at 0000 UTC to 0100 UTC Monday

#### OCARC Club Nets:

- **10 Meter Net:** Every Wednesday night at 7:30 pm to 8:30 pm Local Time. SSB 28.375 MHz
- **2 Meter Net:** Every Wednesday night at 8:30 pm to 9:30 pm Local Time. FM Simplex 146.55 MHz

#### Other Nets:

- **Net-AT-9:** Wellness & Support  
Monday thru Friday 9:00 am and 9:00 pm Local Time  
147.090 MHz (+600 MHz) No PL

Send an email to *Ron W6WG*, [w6wg@w6ze.org](mailto:w6wg@w6ze.org) to have your favorite activity or your recent RadioActivity listed in next month's column.

## OCARC BOARD MEETING MINUTES 2022-03-05

Due to the waning pandemic, the third Board Meeting of the year was via Zoom hybrid on Saturday, March 5, 2022, at Tom W6ETC's QTH. The meeting was called to order by our president, Nicholas Haban AF6CF at 8:19 AM PST. All ten (10) directors were present for a quorum. Jim Schultz AF6N, this month's *RF Newsletter* editor arrived later via Zoom. There were twenty-six (22) topics brought to the Board this morning, and two (2) motions carried, including adjournment.



Fig 1 – All ten (10) Board Directors were present. Four directors and one member attended by ZOOM.

**Director Reports:** Nicholas AF6CF calls for director reports.



Fig 2 – Nicholas AF6CF was a Prez in action at the club's first "hybrid live" meeting since COVID shutdown. Six directors were present at QTH of W6ETC

•**Secretary:** Corey KE6YHX went to the Tustin Post Office three times this past month. He got two dues checks and one Domain Registry renewal request to the Treasurer on Feb 22.

•**Treasurer:** Ken W6HHC reports our only income since the beginning of the year are dues totaling \$1,004. Our outflows have \$237 for Winter Field Day, and \$55 for web hosting. We have a net surplus of \$711. [Note – see page 19 for full Cash Flow report]

•**Technical:** A new member is returning to Ham Radio after a license lapse. He will need some help



getting back on the air.

•**Membership:** Bob AF6C reports we are steadily receiving membership renewals, totaling 49, and the member total is 53 for this year.

### **Old Business**

#### •**Newsletter Editors**

March: Jim AF6N

April: Bob AF6C

May: Tim G. N6GP

June: Steve N1BKB

July: --open to volunteers--

#### •**General Meeting Programs**

March: Brenda Emrick KI6EXL presents "Emergency Preparedness"

April: --to be determined--

#### •**Hybrid Meeting Plans and the American Red Cross**

The American Red Cross is looking better as a possible meeting location with the fading pandemic, and four other possible meeting locations are considered. It is agreed to keep the Zoom option active for the foreseeable future. High speed WiFi and other arrangements for Zoom are discussed in-depth. The April General Meeting is planned to be a hybrid. Tom W6ETC and Ron W6WG are appointed points-of-contact for the meeting location.

Tim M. N6TMT moves to **change the April General Meeting from the 15<sup>th</sup> to the 22<sup>nd</sup>** in order to avoid Good Friday Ken W6HHC seconds, and the motion carries by majority vote at 8:54am PST.

#### •**PayPal Account Ownership**

Tim Goeppinger N6GP reports the requirements for the transfer, and Nicholas AF6CF agrees to set a time.

#### •**Continuation of Zoom Meetings**

It is agreed to continue including Zoom in the meetings.

#### •**Old Generator Plans**

Bob AF6C has the old generator out and plans to start work on it after some construction on his house.

### **New Business**

#### •**Zelle Money Transfers**

The consensus is that Zelle does not look good for our purposes with money transfers, and it is decided against.

#### •**Summer Field Day 2022: FD Chairman Elections**

Nicholas AF6CF and Tim M. N6TMT are elected Field Day Chairmen. The band captains are sorted out, and the Huntington Beach site is preferred. As a note, the Walter Knott location may also be available for Summer Field Day.

#### •**Cyber Security**

Nicholas AF6CF reminds us we may have an increase in scams as the pandemic passes. Some scam emails are discussed, and the "from" email address is often faked (aka "spoofed").

#### •**Member Stories at Meetings**

Nicholas suggests attendees should be offered an opportunity to tell about themselves at the General Meetings.

**•Baker-to-Vegas Race**

Five Board Members are participating in support of Orange PD communications for the Baker-to-Vegas foot-relay race this year. B2V is scheduled for April 8<sup>th</sup> and 9<sup>th</sup>. Some plans are discussed.

**•September General Meeting**

Corey KE6YHX suggests moving the September General Meeting from the 16<sup>th</sup> to the 23<sup>rd</sup>, due to the January resolution to change the September Board Meeting to the 10<sup>th</sup> because of the conflict with Labor Day weekend. The consensus is to keep the General Meeting on the 16<sup>th</sup>. Bob AF6C suggests moving the Board Meeting to one week earlier instead of later. The General Meeting can be rescheduled later.

**•Ask the Elmer**

Corey KE6YHX needs to know the dBi gain of an MFJ-1620T 20m Hamstick for his RF Safety Evaluation. Some of the Board Members say 3dBi is a safe estimate.

Nicholas AF6CF explained that Ron W6WG is making a 160m band-pass filter for a transmitter. It needs to be tested for frequency, and some test equipment is discussed. Ken W6HHC agreed he can test it with his Tracking-Generator spectrum analyzer.

**•Good of the Club**

Ken W6HHC reports a former member, Ian K3IMW, is disposing of some equipment, and he asks if the Club can help. He needs all the equipment taken, and Ken will offer this equipment to members via email.

Bob AF6C reports some false hits on the PayPal application of our web site. Nicholas AF6CF says this is part of our cyber-security. There are some legitimate possibilities, but we should watch this.

Tim G. N6GP says we need some tower-work done, and needs access to storage. He will contact our welder, and Tim M. N6TMT arranges a time to open the storage location.

**•Adjournment**

A motion to adjourn is made, seconded, and carried at 10:21 AM PST.

--Respectfully submitted by Corey KE6YHX, OCARC Secretary



## OCARC GENERAL MEETING MINUTES 2022-02-18

Due to the ongoing pandemic, the second General Meeting of the year was via Zoom on Friday, February 18, 2022. The meeting was called to order by our president, Nicholas Haban AF6CF at 6:59 PM PST. There were twenty-five (25) members, guests and visitors present, including our speaker.

### •Pledge of Allegiance

In honor of President's Day, Nicholas plays our National Anthem at 7:00 PM PST.

### •Meeting Presentation

Nicholas AF6CF turns the meeting over to our vice president Tim Goeppinger N6GP. Tim introduces Club member Wayne Overbeck N6NB. Mr. Overbeck has presented for our Club many times before, and has had cover stories featured on *QST Magazine*, both last year, and 50 years prior. He has done VHF contesting in "pack rovers," constructed tower trailers, has had DXpeditions and many other accomplishments. His web site is [www.n6nb.com](http://www.n6nb.com).

Tim turns the meeting over to Mr. Overbeck. Wayne presents "RF Safety." He tells us the FCC has new rules regarding this, and Ham Radio operators are no longer exempt from the "routine evaluation for RF safety." There are two ways to make this evaluation.

First, Wayne explains the use of an RF field meter to meet this requirement. There are many types of this meter, both professional and ones made for the consumer market. Second, it can be calculated from parameters. Wayne wrote a computer program for this purpose. This open-source program is written in BASIC, and was approved by the FCC about 30 years ago. Wayne talks about the activity, research and history of the FCC RF safety developments, including involvement with his position at the National Association of Broadcasters.

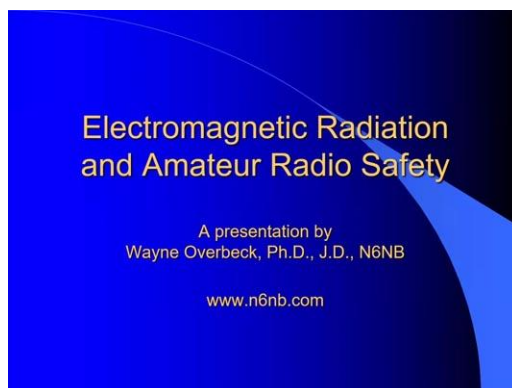


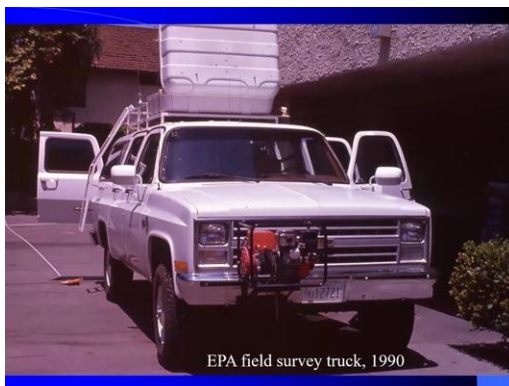
Fig 1 – Electromagnetic Radiation and Amateur Radio Safety



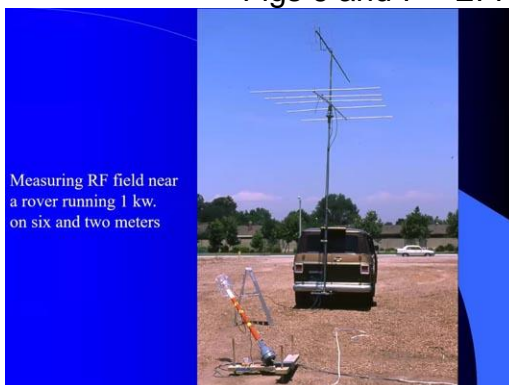
Figs 2 and 3 – RF Field Meters and The National Association of Broadcasters



FCC, EPA launch field survey of ham stations in 1990  
(I went along with them)

Fig 4 – Article: “Is Amateur Radio Hazardous to our Health?”  
Fig 5 – FCC, EPA launch field survey of ham stations in 1990

Figs 6 and 7 – EPA Field Survey Truck



Figs 8 and 9 – Measuring the RF field near a rover running 1 kW





Fig 10 – Measuring RF from a 19" whip with 100 watts on two meters

<p>FCC adopts 1992 ANSI standard for RF exposure, making public exposure limit five times stricter than workplace exposure limit, but still based on <i>thermal effects only</i></p> <p><b>Current safety standards and health</b></p> <ul style="list-style-type: none"> <li>The recent EMF scientists' appeal does not propose a specific standard for exposure to EMFs.</li> <li>Current U.S. standards (and most others) are intended to protect only from the <i>thermal effects</i> of EMFs (i.e. excessive body heating).</li> <li>EMFs at <i>athermal</i> levels are a major concern now, with college textbooks and an international academic body (the Bioelectromagnetics Society) addressing the issue of weak EMFs and health.</li> </ul>	<p>In 1996, FCC removes "categorical exemption" of amateur radio stations but adds new exemption for low-power, mobile and hand-held radio equipment.</p> <p><b>FCC RF safety regulations</b></p> <ul style="list-style-type: none"> <li>Maximum permissible exposure (MPE) limit varies by frequency and is lowest at VHF (30-300 MHz) because the human body is most susceptible to RF heating at those frequencies.</li> <li>The lowest MPE is 1 mW/cm<sup>2</sup> (averaged over 6 minutes) in <i>controlled environments</i> and 2 mW/cm<sup>2</sup> (averaged over 30 minutes) in <i>uncontrolled environments</i>.</li> <li>Amateurs must meet the controlled-environment standard on their own property and uncontrolled-environment standard in public places and on neighbors' properties.</li> </ul>	<p>In 2019, FCC removes exemption for low-power, mobile and hand-held radios. This requires most hams to do "routine evaluations" of their stations for RF safety compliance.</p> <p><b>FCC regulations (2)</b></p> <ul style="list-style-type: none"> <li>FCC/EPA field survey in 1990 found that only a few amateur stations exceeded the less-strict RF exposure standard in effect at the time.</li> <li>IEEE proposed a new and tougher standard, which ANSI adopted as C95.1-1992.</li> <li>FCC ET Docket 93-62 (1996) adopted the bulk of C95.1-1992, with modifications, setting stricter exposure limits for all FCC licenses.</li> <li>93-62 removed amateurs' former categorical exemption from doing routine evaluations.</li> </ul>	<p>2019 FCC order retains the 1992 ANSI standard for RF exposure, based only on thermal effects. FCC declines to adopt a stricter standard for <i>athermal effects</i>.</p> <p><b>FCC regulations (3)</b></p> <ul style="list-style-type: none"> <li>Low-power ham stations and push-to-talk mobiles were exempt from doing "routine evaluations" until recently.</li> <li>Now most amateurs must do routine evaluations of their stations to assure compliance.</li> <li>Routine evaluations can be done with a simple computer program, by consulting tables in Supplement B to FCC Bulletin 65 or by doing measurements.</li> <li>Test questions on RF safety were added to amateur license exams (elements 2, 3A and 3B).</li> </ul>
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Figs 11 through 18 – History of FCC RF Safety Regulations

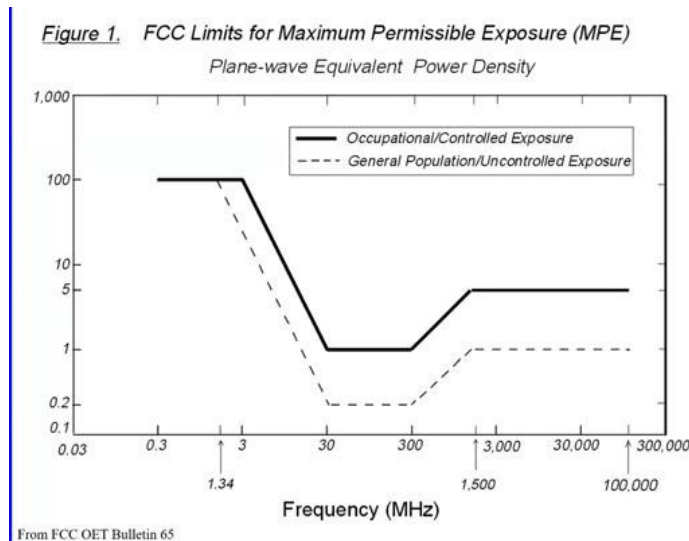
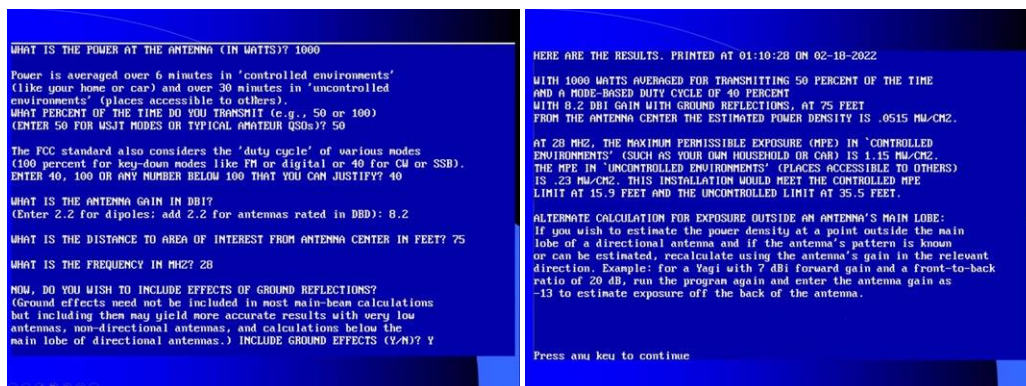


Fig 19 – FCC Limits for Maximum Permissible Exposure



Figs 20 and 21 – RF Exposure Calculator part 1



Figs 22 and 23 – RF Exposure Calculator part 2

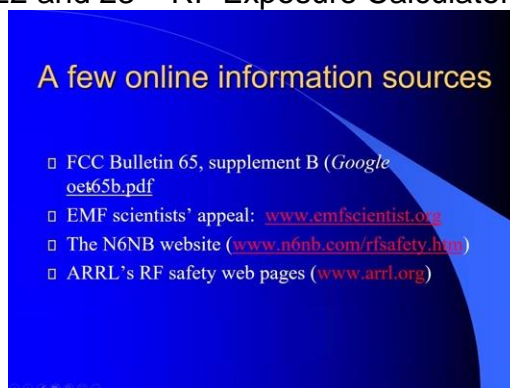


Fig 24 – A few online information sources

### •Questions and Answers

Wayne turns the meeting back to Tim G. N6GP. Tim calls for questions from the audience.

Tim starts off the questions asking why there is a low upper limit for 30-300 MHz, as opposed to higher limits for higher and lower frequencies. Wayne tells us people corporeally absorb the most thermal effects in that range.

Nicholas AF6CF, Steve N1BKB, and Arnie N6HC bring up instances that lead to the controversy surrounding this topic. Wayne tells us about the idea of “prudent avoidance,” and turns the meeting back to Tim G.

Tim tops it off with the raised awareness regarding this topic, and on behalf of the Club, appreciates someone of Wayne’s caliber giving this very helpful and useful presentation. He then turns the meeting back to Nicholas AF6CF.

Nicholas is very thankful and proud to have our own presenters like Wayne in the Club.



**Business Meeting**

Our president, Nicholas AF6CF starts the business meeting at 8:12 PM PST. Nine (9) Board members were present for a quorum. Five (5) topics were brought to the Board tonight, and one (1) motion carried, adjournment.

**Director Reports**

Nicholas AF6CF starts the Director Reports.

•**President:** Nicholas AF6CF is in Yuma, Arizona, and attended the Yuma Hamfest. The event was lacking in the popular vendors, but there were many equipment manufacturers, attendees, and swap meet vendors.

•**Vice President:** Tim G. N6GP tells us we have a presenter for the April General Meeting, Brenda Emrick KI6EXL, with the Costa Mesa Fire Department, speaking on "Emergency Preparedness."

•**Treasurer:** Ken W6HHC refers us to the financial report for the end of January in the February *RF Newsletter*. We have a steady stream of 2022 dues coming in, and very few expenses, including Winter Field Day. The Club is in a good position and we have reasonable finances.

•**Activities:** Ron W6WG shares with us the Winter Field Day group photo, and tells us we may have the results by next year H1H1. It went very smoothly, and we are hopeful for 2023.

**•Ask the Elmer**

There are no items for Ask the Elmer.

**Good of the Club**

Arnie N6HC congratulates Ron W6WG and Tim N6GP for an excellent job on Winter Field Day and the impressive score. Arnie couldn't attend due to family travel considerations, but looks forward to participating next year.

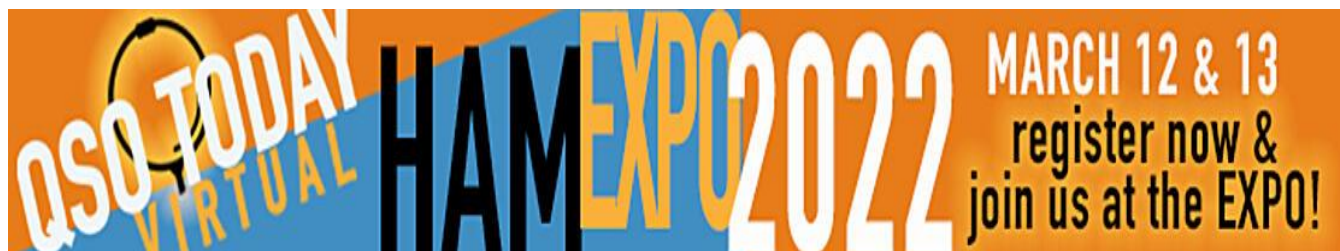
Tom W6ETC thanks Ron W6WG for taking the time for the hour-and-a-half impromptu interview on the CARA Net-At-Nine the Friday night before Winter Field Day.

Nicholas AF6CF calls attention to the need of a GOTA station at future Field Days.

**•Adjournment**

A motion to adjourn was made, seconded and carried at 8:25 PM PST.

--Respectfully submitted by Corey KE6YHX OCARC Secretary



### 60 speakers, Buildathons, Prizes at March 2022 QSO Today Virtual Ham Expo

Tickets are on sale now for the upcoming **QSO Today Virtual Ham Expo on March 12-13, 2022**. It's an amazing experience for anybody that wants to improve their amateur radio knowledge and get exposed to new ideas, cutting edge ham radio technology, and practical operating and building techniques. And, there is no need to travel - anyone can participate from their home or office! Information and tickets can be found at <https://www.qsotodayhamexpo.com>. Below are some Expo highlights that we want to share with you:

**Watch the Keynote Presentation.** We are excited to announce that **Courtney Duncan, N5BF**, will be our **keynote speaker**. Courtney will talk about the importance of amateur radio and technical hobbies to advance global technology and mankind's "big projects". Courtney just retired from JPL, NASA's Jet Propulsion Laboratory, where he supported numerous missions with digital and radio frequency hardware and software, most recently as telecommunications lead for the Ingenuity Mars Helicopter.

Listen and engage with 60 ham radio luminaries on some 20 different topic areas - there is something for everyone. Here are a few of the presentations, from general to expert levels:

[3Y0J: The Bouvet DXpedition](#)

[APRS Picoballoon Flight by a Rank Amateur](#)

[Core HF Communication Concepts: Fundamentals of Shortwave Propagation](#)

[Deep dive of an FPGA implementation of DVB-S2](#)

A complete list of speakers can be found at <https://www.qsotodayhamexpo.com/speakers1.html>

**Watch as many presentations as you want!** A big limitation of in-person events is that you can't watch many of the presentations (you can only be in one room at a time). At the Expo, return anytime within 30 days to view any presentations you missed as well as explore exhibitor offerings. Our presentation videos with Q&A from previous Expos are still enjoyed by amateurs on our Vimeo channel.

**ARRL, the national association for Amateur Radio®** in the United States, is a QSO Today Virtual Ham Expo Partner. [FlexRadio](#) is the Expo's Platinum Sponsor, [Elecraft](#) is our Gold Expo.

**Early Bird Tickets are just \$10 (through March 6)** and then \$13.50 to the end of the on-demand period. Tickets include entry for the Live 2 day period and the 30 day on-demand period. Save on gas, lodging, and travel to attend the QSO Today Virtual Ham Expo on March 12-13.

For more information, go to <https://www.qsotodayhamexpo.com> .



# OCARC Cash Flow - Year to Date

1/1/2022 through 2/27/2022

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Category	1/1/2022- 2/27/2022
<b>INFLOWS</b>	
Dues, Family (PayPal)	85.88
Dues, Membership	150.00
Dues, Membership (PayPal)	739.96
Dues, Membership (PayPal) 2023	28.46
<b>TOTAL INFLOWS</b>	<b>1,004.30</b>
<b>OUTFLOWS</b>	
Web Site Hosting	55.42
WFD	26.68
WFD - Food	17.90
WFD - Propane	43.06
WFD Rental - Tent	150.00
<b>TOTAL OUTFLOWS</b>	<b>293.06</b>
<b>OVERALL TOTAL</b>	<b>711.24</b>

# MiniTiouner-Express

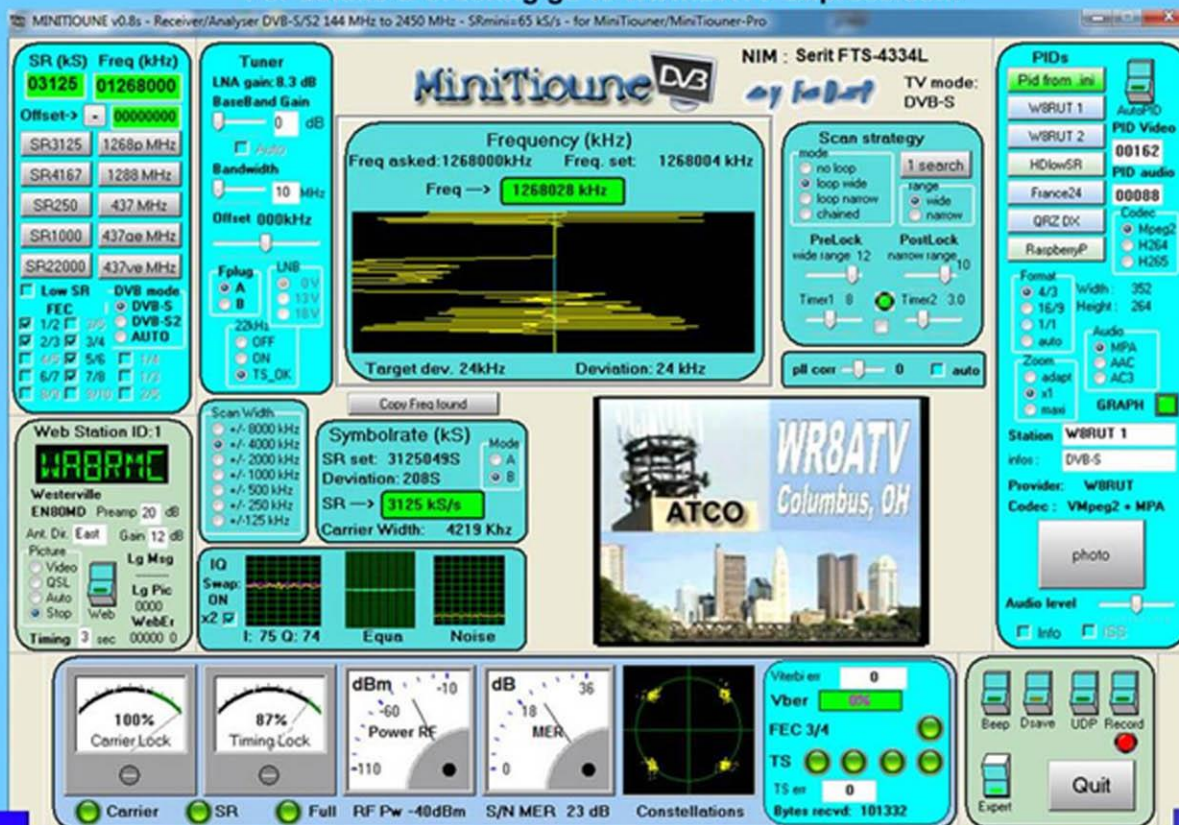
## Digital Amateur Television DVB-S/S2 Receiver / Analyzer



Available at [DATV-Express.com](http://DATV-Express.com)

- Operates with Windows PC using free MiniTioune software from Jean-Pierre F6DZP
- Smaller than a stack of 2 decks of cards (picture above is full size)
- Two independent simultaneous RF inputs with internal preamps
- High sensitivity -100dBm @1288MHz – at 1/2 FEC
- Fully assembled/tested in aluminum enclosure
- Covers 144-2420MHz (ideal for Space Station DATV reception)
- Symbol rates from 75 KSymb/s to >20 MSymbols/sec
- Uses external 8-24VDC supply or +5V from USB-3 port (with small modification)
- Real time signal modulation constellation & dBm signal strength display
- Price: US \$75 + shipping – order with PayPal

For details & ordering go to [www.DATV-Express.com](http://www.DATV-Express.com)



(MiniTioune display above is the ATCO 1268MHz DVB-S repeater signal at WA8RMC QTH 15 miles away).