



RF



ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. LXI NO. 06

P.O. BOX 3454, TUSTIN, CA 92781

June 2020

The Prez Sez...

By Dan KI6X



We are now coming up to the half waypoint of the year. The last nearly three months of disruption has been conflicting for me. It has gone very slow with limited locations open, lack of things to do outside the house, distancing, and some working from home. But it has also gone very fast as in its June already, where did the time go!

June is our normal "Big Field Day" push. This year not so much as a club group but as separate individuals so look elsewhere in this issue for more FD information. We are also going to try a FD assistance email address where there will be a few of us willing to try to help with issues in setting up or getting your log into the ARRL, please see **page 3**.

I can't promise someone will come over and set you up, but the team will try some email-based assistance. Anyone that wants to help answer FD questions can be added to the distribution let me know. After you operate you will send in your log with a specifically formatted club name, so we also get in a club ranking of the combined scores. All scores count no matter how small.

Our June General Membership meeting will be via Zoom again. We currently do not have access back at the Red Cross. Hopefully July we will be back in person. Our attendance is higher on-line, but a lot is missed out on. If someone is willing to set-up video+ when we resume in-person meetings, we could have a hybrid meeting for a couple months after we are in person again.

.....**Continued on page 3**

NEXT MEETING

June 17, 2020

7PM

ONLINE ZOOM

OCARC Virtual Meeting on

**"Home-Based Field Day
Preparations"**

by N6GP and K7JA

**All current members will
receive an email invite**

**DURING THE
CORONAVIRUS
(COVID-19)**

**All OCARC Nets
Remain Active!**

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Monthly Events:**General Meeting time & location:**

REGULAR MEETINGS are
CANCELLED until further notice
Normally Held third Friday of
the month at 7PM, located at
The American Red Cross
600 Parkcenter Drive
Santa Ana, CA
See ZOOM announcement on
Page One

Club Breakfast (Board Mtg) info:

Held the First Saturday*
of the month at 8am
Marie Callender's Restaurant
307 E. Katella Ave
Orange, CA 92867
***Temporarily cancelled**

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
Mon, Wed, Fri 8:30 PM - 9:00
PM Local time
Net Control: Corey, KE6YHX

75M 3.883 MHz LSB

Wed ~9:15 PM
Follows right after end of 2M Net
Net Control: Corey, KE6YHX,

OCARC 2020 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

• \$3. plus mailing costs if applicable
Dues are subject to change without notice

The Prez Sez...
Continued from page 1

As always, read the emails from the club when you receive them. You may get more this month since we have various things going on: FD, Zoom June meeting, storage locker contents move (cancelled as part of FD).

Keep up the assistance that you are willing and able to give your club. Keep the encouragement through these tough times and you may contact myself, or any of The Board members, for anything to better the club and our members.

SPECIAL FIELD DAY ASSISTANCE EMAIL ADDRESS

OCARC as setup an email address to support Field Day at Home technical issues. This is not a reflector where we discuss Field Day; it is a club contact point for members needing help. Please email our support group for computer logging set-up and submission assistance. Please try to have everything working in your shack before Field Day 2020.

This email has been setup so that no one support person is responsible for all help. Multiple people with get the emails so hopefully we can help. – FIELD DAY2020@W6ZE.ORG – More to follow in email blasts, as we get ready for FD 2020.

Dan, KI6X, President

RadioActivity June 2020

Upcoming Activities:

June

- ***ARRL June VHF QSO Party:** 1800 UTC Saturday June 13 through 0259 UTC Monday June 15.
- **Kids Day:** 1800 UTC through 2359 UTC Saturday in June 20
- **Field Day:** 1800 UTC Saturday 27 through 1800 UTC Sunday 28.

July

- **RAC Canada Day Contest:** 0000 UTC through 2359 UTC Wednesday July 1.
- **VHF-UHF FT8 Activity Contest:** 1700 UTC through 2000 UTC Wednesday July 1.
- **FISTS Summer Slow Speed Sprint:** 0000 UTC through 0400 UTC Saturday July 4.
- **IARU HF World Championships:** 1200 UTC Saturday July 11 through 1159 UTC Sunday July 12.
- **FISTS Summer Unlimited Sprint:** 0000 UTC through 0400 UTC Saturday July 11.
- ***CQ WW VHF:** 1800 UTC Saturday July 18 through 1159 UTC Sunday July 19.
- ****North American QSO Party / RTTY:** 1800 UTC Saturday July 18 through 0559 UTC Sunday July 19

* 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:

- **West Virginia QSO Party:** 1600 UTC Saturday June 20 to 0400 UTC Sunday June 21

Super QP Challenge: Year Long Event

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 6TH of the month. 1200 Sat. to 2359Z Sunday.
- **SKCC Sprint** (Straight Key CW) 0000Z to 0200Z on the 4th 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

The Coronavirus pandemic has captured the bulk of our attention recently. Locally it has given birth, among other things, to several new ham networks. We are all encouraged to participate in them. Among the new nets are:

Corey KE6YHX, the primary net control station for OCARC nets, has added two new weekly 2M nets to focus primarily on service and support during the Coronavirus health-threats and restrictions. The two

nets are called the **"OCARC Coronavirus Support Net"** to meet each Monday and Friday on 146.550 MHz simplex) at 8:30 PM.



Tom W6ETC reported that the CARA (Catalina) repeater (147.090+) is being used to operate a new support net for hams called **"Net at Nine"**. The nets are meeting Monday and Friday at 9 AM with Tom serving as Net Control. Again, the focus will be centered on service and support during the Coronavirus health threat and restrictions.

OCARC continues to host the general discussion nets. Corey KE6YHX as Net Control

10M: 28.375 \pm MHz SSB - Wed - 7:30 PM - 8:30 PM

2M: 146.55 MHz Simplex FM - Mon, Wed, Fri 8:30 PM - 9:00 PM.

Send an email to Ron W6WG, w6wg@w6ze.org to have your favorite activity or your recent RadioActivity listed in next month's column.

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OCARC Stay at Home Field Day for 2020

By Tim Goeppinger, N6GP

There Have Been a Few Recent Developments Regarding Field Day This Year

1. The Centinela School District has advised us that the Walter Knott Ed Center is not available for use this year, as the District has not yet opened up their facilities for events.
2. The ARRL came to their senses and made two temporary rule changes: First, that home 1D stations may contact other 1D stations for points, and secondly that aggregate scores submitted by many club members would be posted as a large club competition. With these changes, it will be likely that the activity will be high this year, and the bands may be crowded.
3. Our members were polled via email whether or not they would like to operate socially distanced in cars on a hilltop somewhere, or from home. It was unanimous that everyone wants to operate from home using his or her own call signs.

Operating Field Day From Home

A great starting point is to download the Field Day Rules at http://www.arrl.org/files/file/Field-Day/2020/1_61-2020_Rules.pdf Next choose the class that matches your station. From home using commercial power would be 1D. Home with emergency power like a generator is 1E. One of our members, Doug K6JEY plans to operate portable from his front yard with portable antennas QRP in the 1B Battery Class. If you are in Orange, Riverside or San Bernardino counties, you are in the ORG section, and if you are in Los Angeles County, you are LAX.

Choose your power wisely, as it has a huge effect on your score in the form of a multiplier. Operating at any time during Field Day with 151W to 1000W gives you a times 1 multiplier. Six watts through 150 watts, double your score with an x2 and QRP 5 watts or less multiplies your score by 5.

A good strategy would be to use 20 meters and 40 meters back and forth during the day, then 40 meters at night. 15 meters just has not been productive this year for contests, but you might want to check it mid-day. If you know CW, that give you 2 points per QSO, vs. only 1 for Phone. Digital also gives 2 points.

Ten and six meters should also be checked during the day for Sporadic E openings. Two-meter FM is always good for a couple dozen local QSOs on a vertical antenna. Try 146.52 and .55, and also 446.0 on 440.

For a Windows computer, you have a couple of good options for logging software – one nominal cost and one free. The free option is N1MM software, which is very powerful, and supports almost every contest that is run throughout the year. It has a steep learning curve but is very well written and supported by a user group. Use version 1.0.8423.0 or later to handle this year's rule change. Download it here <https://n1mmwp.hamdocs.com/downloads/n1mm-full-install/> The paid option is from N3FJP, which is a specialized Field Day logger that we have used for about 20 years at W6ZE. It is known for its simplicity, and for its nice user interface.

The cost is \$8.99, and can be purchased here: <https://www.n3fjp.com/fieldday.html> and you can try it out before you buy it, but has some **SIGNIFICANT** features disabled if you do not buy it.

After Field Day is over, you will want to write out Cabrillo logs or Dupe Sheets to send to the ARRL. Start the upload process here <https://field-day.arrl.org/fdentry.php> We all need to standardize on the same club name for the aggregate score, so use "Orange County ARC CA", because there are several other Orange Counties in the country!

The W6ZE For A Day Raffle!

Since our club won't be needing our call sign this year, the Board and Club Trustee have decided to conduct a no-cost raffle during the June General meeting (Zoom Meeting). We will ask for people to raise their hands to enter the raffle, and a lucky person will be drawn from a hat. The winner will have use of W6ZE during the 24 hours of Field Day and will operate with their own privileges. As a bonus, the winner will receive a license to use the N3FJP Field Day log for this year.

The requirements to enter this raffle are:

1. Be a member of the club in good standing
2. Be a licensed radio amateur
3. The winner will make a good faith effort to operate at least for several hours during Field Day
4. The winner will make a good faith effort to submit their log to the ARRL for scoring, and to Bob AF6C for QSLing.

2020 Will Be A Historic Field Day!

This year's Field Day will be one that will be talked about for many years in the future. It is likely to be a fun event with a lot of surprises. This Field Day will show everyone what grit and determination that we have to keep going during difficult times. Additionally, this year's Field Day is a great way to showcase amateur radio as a terrific hobby that has kept many of us sane during this never-ending pandemic. Be a part of history. Operate in Field Day 2020 and get on the air!

By Tim Goeppinger, N6GP

Perfectly Boiled Eggs



Ingredients

- 9 Large Eggs
- Water to cover
- 1 tablespoon Salt [L][SEP]
- Ice Cubes [L][SEP]

Directions

Add two inches of water to lidded saucepan or pot. Place the eggs in the saucepan and add the salt. Cover now if on an electric burner. Place over medium heat and bring to a boil. Cook for two minutes. Turn off heat and cover with a lid. Allow the eggs to sit for 11 minutes. Drain and cool the eggs for two minutes in ice water, but no longer, lest the shell rebind to the whites. Drain and peel the eggs from the large end, the end that floats. [L][SEP]

Deviled Eggs [L][SEP]



Ingredients [L][SEP]

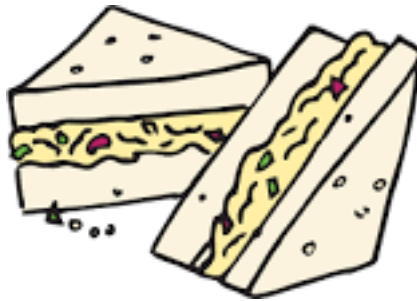
- 9 Large Hard-Boiled Eggs [L][SEP]
- 4 tablespoons (2 oz) Mayonnaise [L][SEP]
- 3 tablespoons (1-1/2 oz)
- Sweet Pickle Relish [L][SEP]
- 2 Sweet Midget Pickles, chopped fine [L][SEP]
- Salt
- Pepper [L][SEP]
- Paprika, for dusting

Directions ^[L]_[SEP]

Slice hard boiled eggs in half lengthwise; separate egg yolks and place in a small bowl; place whites in serving container. Add mayo, relish, pickles, and salt and pepper, to taste, to yolks and mash together with a fork until creamy and smooth. Using the fork and a spoon, place yolk mixture into egg whites; or using a zip-top bag with a hole cut in the corner and a large star tip, pipe the yolk mixture into each egg. Dust the tops with paprika (optional). Refrigerate. Serve cold. ^[L]_[SEP]

Egg White Salad & Sandwich

(2 egg whites per sandwich)



Ingredients

6 large hard-boiled Egg Whites ^[L]_[SEP]
6 tablespoons (2 oz) Mayonnaise ^[L]_[SEP]
4 tablespoons (1-1/2 oz) Sweet Pickle Relish
2 Sweet Midget Pickles, finely diced ^[L]_[SEP]

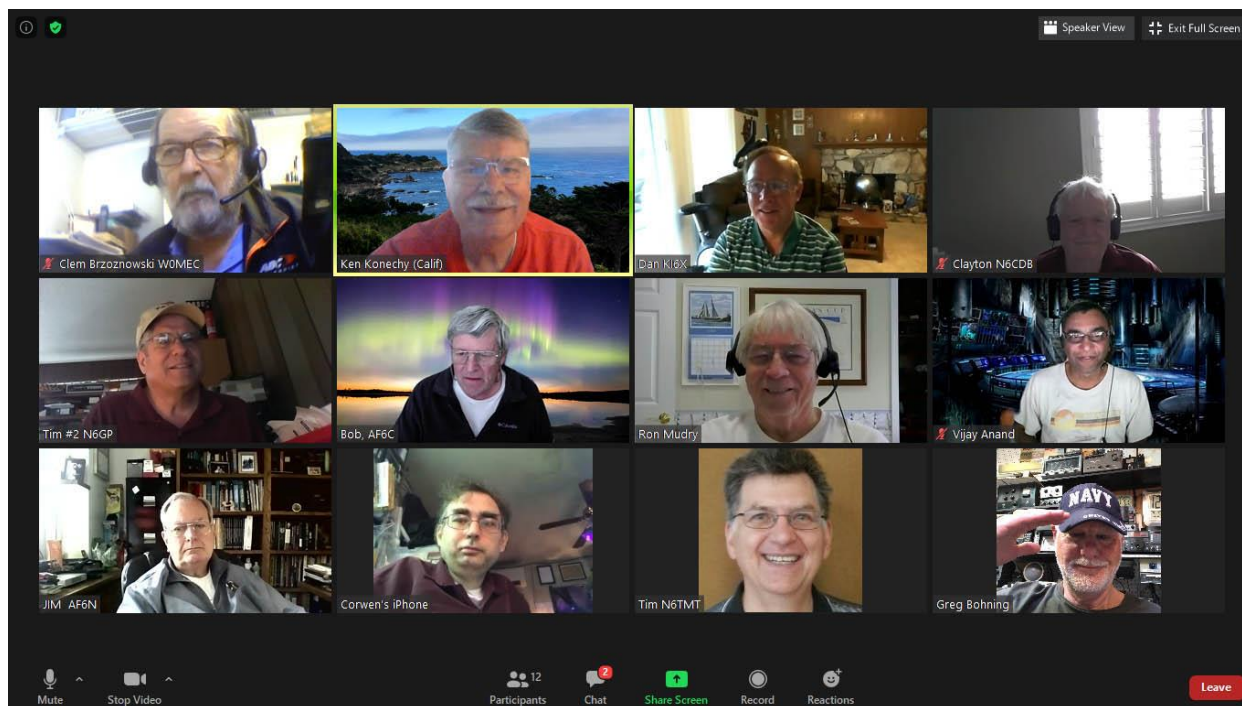
Directions ^[L]_[SEP]

Chop egg whites. Mix all ingredients together in a small mixing bowl. Refrigerate. For an egg-salad sandwich, use on freshly baked bread with extra mayo. ^[L]_[SEP]

By Corey Miller KE6YHX - Club Historian(s)

OCARC BOARD MEETING MINUTES 2020-06-06

Due to the COVID-19 restrictions on physical gatherings, the latest OCARC Board meeting was held **ON-LINE via ZOOM** on Saturday June 06, 2020 at 8:30 AM. In attendance were all Directors and two club members. All board directors were present for a Board quorum. The ZOOM technology organized by Tim N6TMT and co-hosted by "El Presidente" Dan KI6X worked very well and allowed the board to see agendas and reports as well as to see which board member was talking.



**Screenshot of the June Board Meeting held on Zoom
due to Coronavirus health restrictions**

Director Reports:

- **Membership** – Corey KE6YHX reported that the club has a total of 93 members who have paid their 2020 membership (including honorary members). Approximately 20 members from 2019 have not renewed for 2020.
- **Treasury** - Greg W6ATB confirmed that the renewal check from Clem WØMEC had been received. Greg W6ATB reported that the club had an asset balance of \$4,100 and a net profit of \$790, so far Year-to-Date. See Newsletter Page 18 for a cash flow report of the club's finances.

Old Business:

- **Newsletter Editors**
June – Greg W6ATB
July – Ron W6WG
August - open
- **General Meeting Programs**
June – **ONLINE ZOOM** on “**Home-based Field Day Preparations**” by N6GP and K7JA
The Board has agreed to conduct a ZOOM General Meeting in June that is open to all OCARC members.
July – “**DMR Radio**” by Michael Rickey AF6FB
Aug – open
Sept – “**Ham Test Equipment**” by Doug Millar K6JEY.
Oct – “**Radio Auction**”

• Bylaws Update Committee

1. Corey KE6YHX provided an updated draft of the Bylaws update - dated 2020-05-11, a summary spreadsheet of the proposed changes, and a standalone file with the club elections details...to be reviewed by the Board.
2. The Board reviewed and agreed upon changes to the elections wording-changes, Technical Committee Chairman wording changes, and formatting improvements for indenting subsections (especially in Article II on Membership).
3. Corey agreed to incorporate the agreed changes into a new draft of the Bylaws and send it to the Board members for another review cycle.is now working to clean-up the official revisions.
4. The board members will have two weeks to review the changes after receiving the newly updated draft...then a special ZOOM board meeting will be called to just review all proposed changes [secretary's note: probably Monday June 22].

• OCARC Tri-fold Brochure update

Dan KI6X and Bob AF6C agreed on all of the proposed changes that have been made for the Tri-fold Brochure. Bob will mail out the completed update to the board.

• ARRL Field Day 2020

1. Tim N6GP reported that there were not any "takers" on the proposal to set-up a team of mobile stations on a hilltop all using the club W6ZE call letters.
2. The plan now is to **ONLY** have club members all working FD from their home using their own call letters. The plan is to have each home station submit their FD score to the ARRL – BUT requesting "club recognition" of operating for benefit of OCARC identified as "**Orange County CA ARC**" [Secretary's NOTE" See Newsletter Page 6 for complete details.]

• ARRL Special Services Club status

Ken W6HHC successfully uploaded all of the updates for the OCARC's Special Services Club to the ARRL web site.

• California QSO Party

Ron W6WG explained that he would provide details on how to operate the California QSO Party in October...after FD is wrapped up.

• OCARC Storage Locker Clean-out

The club has started the plan to move the club's equipment to a "one-car space" garage in Yorba Linda owned by the mother of Tim N6TMT. After the board meeting, Dan KI6X picked up one mini-van-full of equipment and staged is at his QTH and then will transfer those items to the Yorba Linda garage when Tim N6TMT arranges the coordination. Clay N6CDB offered the availability of his pick-up truck to help move the long tower sections. Both Tim N6TMT and Dan KI6X possess a key for the current storage locker.

New Business:

- **Location of June General Meeting** - Tim N6TMT explained that Red Cross does NOT yet allow organizations to meet in its facility. The Board agreed to hold the June General Meeting on ZOOM.
- **Offer of Winnebago RV to OCARC** – The OCARC has been offered possession of an early 1990's Winnebago RV (complete with built-in crank-up tower). The board of directors all agreed that storage costs, maintenance costs, and insurance costs were NOT something that the club could handle. The club will decline the generous offer.
- **Unclaimed HRO Gift Certificates** – HRO reported that there are several unclaimed Gift Certificates that were purchased by OCARC a prize...but never claimed. The club will find out the purchase dates involved, to sort out who owns these gift certificates.

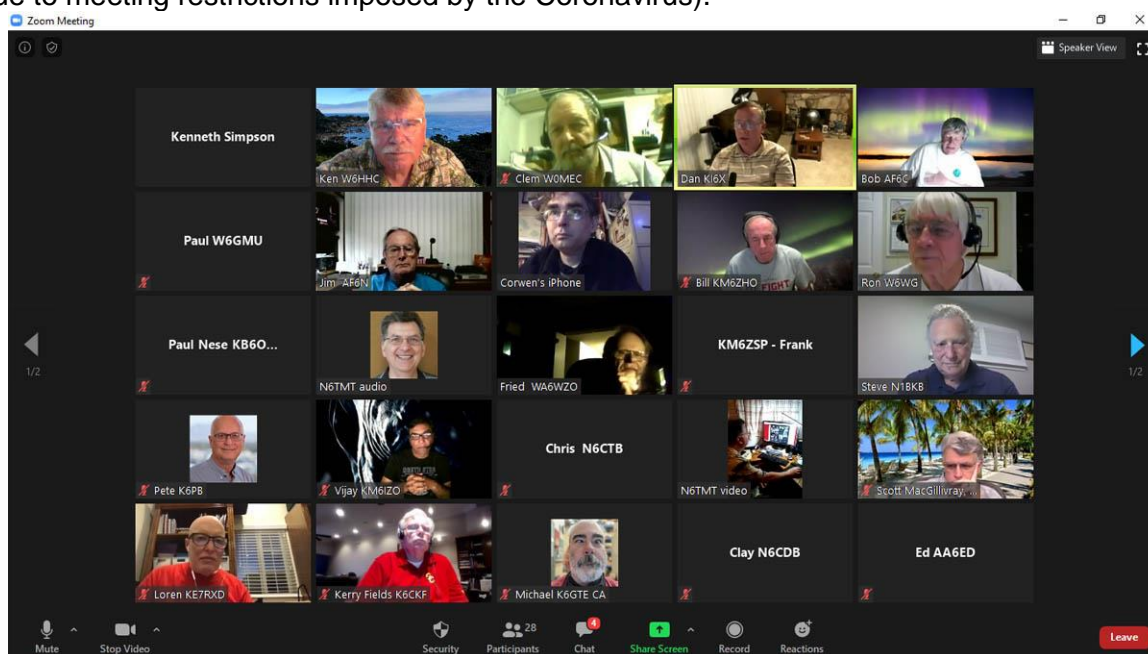
..... ***Submitted by Ken W6HHC, OCARC Secretary***

OCARC General Meeting via ZOOM 2020-05-15

The May OCARC General Meeting was held on ZOOM via the internet on May 15, 2020.

The meeting was called to order at 7:00pm by Dan KI6X.

There were a total of 37 members and visitors in attendance. There was a quorum of officers, with all directors' present. This was the second OCARC General Meeting that was completely conducted using ZOOM (due to meeting restrictions imposed by the Coronavirus).



**A typical Screen-Capture of members in attendance during the meeting.
The majority of attendees could provide video from the home QTH.
But, while some sent no video, everyone could watch video on ZOOM
and could hear the audio during the meeting.**

May Program:

Tim N6TMT first introduced Bob Turner W6RHK on ZOOM as one of the two club program speakers for the evening who talked on:

“The ARRL Program for ARES...”

Bob W6HRK, the Section Emergency Coordinator, who explained that ARES (Amateur Radio Emergency Service) is self-activated and coordinates communications with Red Cross, CERT, HOA, Salvation Army, and individual ARES hams.

Tim N6TMT then introduced Dave Gorin KB6BXD on ZOOM as the second of two club program speakers for the evening who talked on:

“OCHEART, the OC Hospital Emergency Amateur Radio Team...”

Dave KB6BXD, the ARRL District Coordinator for Emergency Communications, explained that OCHEART was in the building stage and was intended to be a rapidly deployable team of hams to replace the old Hospital Disaster Group that assisted local Hospitals and Medical Facilities when they require communications help. More info can be found at OCHEART.net.

Old Business:

- **General Meetings** - Tim N6TMT, vice president, explained that the next Gen Meeting will most likely be also held on ZOOM.
- **Membership** – Corey KE6YHX reported that the club membership stood at 112 members, despite the impact of Coronavirus.
- **Summer FD** – FD Chairman Tim N6GP explained that OCARC plans for FD in June are very fluid. The Coronavirus restrictions on social gatherings will probably result in the school district field NOT being available.
- **Red Cross Needs Blood** – Jim AF6N reported that the Red Cross needs blood donors. You must make an appointment with the Red Cross.

Elmer Questions:

Antenna Complex impedances – Loren KE7RXD asked why/how antennas impedances sometimes show capacitive properties and sometimes show inductive properties? Bob AF6C explained that if the antenna is short it is capacitive, and long is inductive. Short whip antennas are capacitive, that's why you load them with a coil (inductive.)

(This is true for half wave dipoles and 1/4 wave verticals. For antennas that are resonant at a full wavelength, the opposite is true, and those antennas will have a high impedance (KΩs) at their resonance.)

..... ***Submitted by Ken W6HHC, OCARC Secretary***



Press Release

LOS ANGELES - QSO Today host Eric Guth, 4Z1UG, announced that the first QSO Today Virtual Ham Expo will commence on August 8th and 9th, 2020, over a period of 48 hours. This virtual Expo is built on a live virtual reality platform commonly used by Fortune 500 companies and major universities. Attendance is free, and anyone can attend from their home or office.

Eric and his team, including George Zafiropoulos, KJ6VU, have assembled 50+ of the best ham radio mentors in multiple tracks to address this conference from the virtual Expo's auditorium. Icom has taken the lead as the Expo's Platinum Sponsor, along with Gold Sponsors RT Systems, FlexRadio, RFinder, DX Engineering, Elecraft, and GigaParts.

At the Expo, amateur radio operators will be able to:

- Learn from a packed line-up of renowned ham radio speakers such as Ward Silver, N0AX, on Grounding and Bonding; Glen Johnson, W0GJ, on DXpeditions, and John Portune, W6NBC, on building slot antennas for HOA.
- See demos of the latest ham radio equipment from the world's top equipment companies. Attendees can easily ask questions and engage with Exhibitors through video, audio, or chat.
- Share ideas and network with their fellow ham radio operators at any time throughout the Expo.

This platform simulates a full convention experience with an exhibit hall and exhibit booths staffed by live attendants, speaker auditorium, lobby, and lounges.

"I was planning on my own trip to Dayton this year when I heard of its cancellation, followed by Friedrichsaffen, and now Huntsville. With the encouragement of my listeners and guests of the QSO Today Podcast, I spent months looking at alternatives before deciding on a platform to create this virtual event to share with the amateur radio community. Our virtual Expo also means that the

hundreds of thousands of ham radio operators that have never to a 'physical" event can now also participate. Admission is free, and door prizes will be posted to the event's website as they are

added. Since the Expo is completely funded by exhibitor booth sales, I'm encouraged by the great response from Icom and other sponsors" said Eric, 4Z1UG.

The QSO Today Virtual Ham Expo will commence on Saturday August 8th, run for 48 hours as a live event, then will be available as an on-demand event for another 30 days. "How many conventions have I gone to, especially large ones, where I had no time to visit all of the exhibitor booths? Now I can attend every lecture and engage as many exhibitors as I want since everything is available for 30 days after the Expo" said Eric, 4Z1UG.

For more information go to www.qsotodayhamexpo.com

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Submitted by Jim Schultz, AF6N - OCARC Activities

The Difference Between RMS and Peak Watts

Non-math explanation

In the consumer electronics world, you will often hear about watts, power handling, and power output. The terms are used interchangeably to refer to two values, that is, root mean square (RMS) and peak power rating.

When looking to build a high-performance entertainment system, most people tend to shop for audio and sound equipment based on the one that has the highest power rating. However, this may prove difficult for starters who don't understand the difference between RMS and peak watts.

RMS Watts Explained

Root mean square or simply RMS watts refers to continuous power handling of a speaker or a subwoofer or how much continuous power an amplifier can output. RMS values are usually lower than peak watts ratings, but they represent what a unit is truly capable of handling. Think of RMS power as the average power that a speaker can handle on a daily basis without compromising sound quality or experiencing any distortion.

Peak Watts Explained

The peak power handling is the highest power level that a speaker or a subwoofer can handle in a short burst without blowing. The same holds for amplifiers as the absolute highest amount of power they can put out before failing or without resulting in distortion. We can think of peak watts as the number atop of your car's speedometer. For example, you can drive for maybe 180km/h, but you can't sustain that speed for long without causing mechanical or thermal damage to the car. In the same way, the peak power level can only be maintained for a fraction of a second, although there's no clear definition of how long.

RMS Power vs. Peak Power

When shopping around, you'll notice that some manufacturers rate their products' power-handling capabilities using either the peak watts rating or RMS rating, while most use both values. For example, a unit can be rated at 150 W while another brand may be advertised at 75 W.

At first glance, one might be tempted to think that the former is better because it's rated at a higher power level than the latter. However, upon a closer look, you may notice that the first product is rated for peak watts while the second one is advertising RMS watts. Typically, a unit's peak power handling is double the RMS power handling, which basically means that the above products are actually rated the same: 150 W peak/75 W RMS.

Conclusion

Both RMS and peak watts play an important role in your sound system, and they're vital when comparing your speakers with amplifiers or subwoofers. When matching speakers or subwoofers to amplifiers, you should compare either two RMS values or two peak ratings.

Therefore, one should not get confused when comparing peak and RMS ratings. This will ensure that you'll get the best out of each component. If the power outputs aren't correctly matched, the

components can overheat and create a couple of other issues. However, it's important to stress that you should always use RMS ratings—not peak wattage—when matching and comparing gear.

David M. Foster is Head of Content at [SpeakerChampion](#).

NOTE:

Power, academically speaking, can be thought of as the power to heat a resistor load. So, 1-Amp at 1-volt DC will produce 1-watt in a 1-ohm resistor. To get the same heating effect with AC requires 1V RMS or 1.41V peak (2.82 volts peak to peak) on a sine wave.

The Editor

OCARC CASH FLOW 1/1/2020 TO 6/4/2020**INFLOWS**

Auction In, Jan 2020	\$1,696.25
Cash Box Deposit	\$140.00
Donation - Michael K6GTE	\$30.00
Donation - N6GP	\$20.00
Dues, Family (PayPal) 2020	\$131.78
Dues, Membership (PayPal) 2020	\$1,190.92
Dues, Membership 2020	\$568.83
Refunds Received	\$15.53
TOTAL INFLOWS	\$3,793.31

OUTFLOWS

Auction Flyer Printing	\$21.55
Auction Payout, Jan 2020	\$1,359.23
Donations - Red Cross	\$250.00
Field Day Winter - Tent Rental	\$130.00
OCARC Historian	\$29.29
Opportunity Drwg - Monthly Exp	\$438.71
PO Box Rental	\$92.00
Refreshments Expense	\$32.65
Storage Locker	\$475.00
Supplies	\$15.85
Web Site Hosting	\$101.94
Web Site Hosting - PayPal	\$57.00
TOTAL OUTFLOWS	\$3,003.22

OVERALL TOTAL **\$790.09**

Submitted by Greg W6ATB, OCARC Treasurer

MiniTiouner-Express

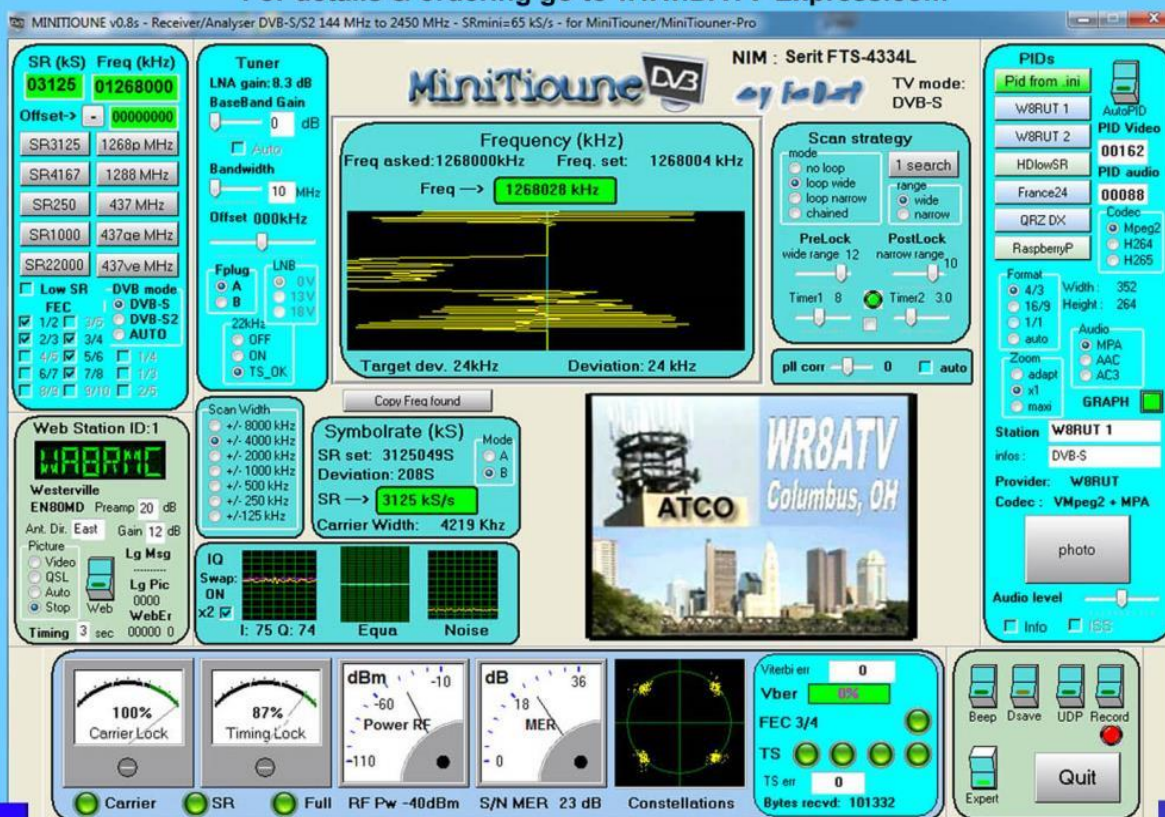
Digital Amateur Television DVB-S/S2 Receiver / Analyzer



Available at 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



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