



The

July 2020

# Propagator

The Monthly Newsletter of the South Orange County Amateur Radio Association

## In This Issue

**President's  
Message.....1**

**DXpeditioning. 2**

**Membership  
Report.....2**

**Soara Elmer  
Saturday.....3**

**Tracking Noise.3**

**TV Twinlead  
Antenna.....10**

**Soara Nets ...10**

**GotoMeeting. 10**

**Sale Mail List.15**

## General Meeting

July 20, 2020  
7:00 PM  
via  
[GoToMeeting](#)

## President's Message, July 2020

Greetings and we sincerely that all of you are able to stay safe and healthy doing the extended duration of this Covid-19 outbreak.

As you know, SOARA is attempting to continue to offer you an enhanced ham radio experience, and we have instituted, virtual meetings, several new radio nets, and recently, remote virtual license testing as well. We continue to seek more ways to enhance your enjoyment of amateur radio during these trying times, and welcome any or all suggestions you may have. If we sometimes seem slow to implement some things, such as testing, it's likely because some factors are beyond our control. Testing is a good example. It took time for the ARRL VEC to evaluate and authorize various online testing groups and procedures. The ARRL recognized that virtual testing had to be carefully evaluated to maintain the integrity of the testing procedures, lest the FCC decertify the ARRL as a VEC and possibly cancel licenses or upgrades from their virtual testing sessions.

We had a quite successful ARRL Field Day 2020, since the last issue of the Propagator, and while it was a very different experience for most of us, I was still able to enjoy FD, but certainly missed the camaraderie of all of you, and, of course the challenges of setting up towers, large shelters, stringing long dipoles over the light standards and pine trees at Gilleran Park. Let's not forget about the food. I'd wager that SOARA has the best food at field day of any group around. Let's keep that a secret though. lest we be over-run with guests next year!

ON the topic of Field Day, if you haven't already done so, don't forget to submit your entries before the deadline, this 28th of this month. Please remember to also credit SOARA under the clubs/groups block n the entry form by using "South Orange Amateur Radio Assoc." For the online entry (50 bonus points for you if you submit online) it seems that we appear twice in the pull down tab under Clubs/Groups: first as 'South Orange ARA' and then lower as "South Orange Amateur Radio Assoc." Please use the latter or longer designator for SOARA. If you've

already submitted online with the shorter one, we've emailed the ARRL asking them to consider both as our entry, but best to use the longer one if not.

Should be a great virtual meeting this month, because Arnie, W6HC is always a fun and very interesting presenter! Hope you can attend online.

**Ray, AE6H**  
**SOARA President**

### **General Meeting - July 20 via GotoMeeting** **Arnie Shatz, N6HC - DXpeditioning**

Our virtual July 20, 2020 club meeting will feature Arnie Shatz, N6HC, who will tell us about one of the last DXpeditions before COVID-19 put an end to DXpeditioning. Arnie was a member of the VP6R team to Pitcairn Island in the South Pacific. Join us to learn about the island history and its current inhabitants, geography and amateur radio operation from this rare DXCC entity which is also one of the most isolated places on earth.

Our General Meetings have always been open to the public and our online platform using GoToMeeting is also open to anyone that wants to join in. You can join our GoToMeeting using either the GTM plug-in or access it via the Chrome web browser. We will also record this meeting and post a link to this page after the meeting.

This is the [link](#) to joining the meeting or you may call in by phone **(646) 749-3129** using this Access Code: **803-549-573**

**Erik, W6INE**

### **Membership Report**

We are now at 221 active members with 3 New members and one in process!

**Doug, KM6IUP    Joseph, K7KCE    Ben, KB6JP**

If You know someone that wants to join SOARA, the application signatures have been temporarily waived. The process is: fill out the application, email it to [membership@soara.org](mailto:membership@soara.org), pay your new member dues & initiation fee \$90, when the board meets we will review and vote on your application. Once approved, I will verify your email and send you the SOARA Repeater User's Guide & Membership Manual electronically in PDF. Now, the hard part. You need to participate to maximize your value! Something as simple as participating in a net will get you going. Check out [www.soara.org](http://www.soara.org) for event details.

**73,**  
**Ed, WA6ED - SOARA Membership Director**

**Contacting Soara:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690  
Send e-mail to [membership@soara.org](mailto:membership@soara.org) or leave a message at 949-667-0173  
Facebook: K6SOA Twitter: @K6SOA

## **SOARA Elmer Saturday/Tech Net**

We have a lot of fun at SOARA Saturday events talking about all types of topics. This week we discussed microphones, antenna analyzers, and a new update of WSJTX 2.2.2.2 for FT8 and more digital modes. More details here:

<https://www.soara.org/soara-saturday-log/>

Join us on Saturdays 9am, on Laguna Beach 147.645 or Santiago Peak 447.180 repeaters. Bring your questions or be there to help others.

**73,**  
**Ed, WA6ED**  
[wa6ed@soara.org](mailto:wa6ed@soara.org)  
**SOARA Elmer Saturday Coordinator**

### **The Ability to Characterize Interference in the Amateur Bands is a Feature of Modern Software Defined (SDR) Radios Rarely Mentioned but Very Practical and often Entertaining**

**Episode 2 - Mystery Solved**  
**Prepared by Charlie KC6FZY June 20, 2020**

In last month's SOARA Propagator the author described a particularly troublesome picket fence noise observed across the entire 40-meter amateur band. Each noise line in the waterfall had a bandwidth of about 100 Hz moving downward in frequency at about 100 Hz per minute. At times, the noise made SSB signals of S9 unintelligible. The five bright bands in Figure 1 are an ICOM 7300 waterfall display of the noise on Saturday, June 20, 2020 at 10:00 AM1. At one point a noise band was centered on 7250 KHz and the author had to use the Northern Utah SDR to hear the California Rescue Communication 40-meter net controller. This was not a good situation and made identifying the source and remedying it important.



Figure 1. 40 Meter Picket Fence S9 Noise Dominates Band

With the assistance of the local ARRL Monitor Volunteer<sup>2,3</sup> the noise source appeared to originate from two sources in San Clemente as mentioned in the June Propagator article. The first was from the home of a 91-year-old woman and the second the home next to her. The woman was very cordial and gave us permission to inspect her home for the source of the noise. An ARRIS router was found in her home with a dangling Ethernet cable hanging from the back of the router. However, removing power from the modem (and the computer and printer connected to it) did not affect the noise. As a result, it was concluded that the noise was not coming from this location.

The ARRL Volunteer then conducted direction-finding measurements using the magnetic probe shown in Figure 2 on the side of the woman's home and determined that the noise was coming from the house next door on the north side of the garage. The smaller probe was able to pinpoint the location of the noise more precisely than the much larger diameter magnetic loop antenna used previously. The probe's coax loop is 12 cm in diameter and incorporates a 30 mm ferrite toroid in the box to eliminate common mode interference of the desired signal. The probe design was provided by the Paul Cianciolo, W1VLF an ARRL EMC Engineer and fabricated by the author.



Figure 2. A small magnetic loop probe was used to precisely locate the offending noise source

The author then went next door and explained to the resident that RF noise appeared to be coming from the garage and was interfering with his radio and potentially emergency and other communication services. The author presented his SOARA membership card to the Ring Doorbell to alert the resident that we were not solicitors. After the ARRL monitor explained the situation the resident said he had a few E-bikes in the garage and that we were welcome to examine them as potential noise sources.

Once inside the garage it was clear from the ARRL monitor's HF receiver that the source was emanating from an E-bike battery charger. This was verified when the resident pulled its plug stopping the noise on the monitor's receiver. The resident was as surprised as we were! The bicycle and charger on the work bench are shown in Figures 3 and 4.



Figure 3. Noise Culprit was E-Bike Li-ion 48 V 12 Ah Battery Charger

**Contacting Soara:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690  
Send e-mail to [membership@soara.org](mailto:membership@soara.org) or leave a message at 949-667-0173  
Facebook: K6SOA Twitter: @K6SOA



Figure 4. Battery Charger with Input and Output wires wrapped around Ferrite forms

The solution was straight forward and fixed by installing two ferrite filters on the input and output cords of the offending charger. The noisy charger was a LEW3 Model LW-02 110 W switching battery charger with an input of 100 to 240 VAC and an output of 59 VDC and 1.8 Amps (Amazon cost ranges from \$17.49 to \$22.99). The charger was designed for use with a 48 VDC 12 Ah battery. Another charger was also in use made by Wuxi Dpower Electronic Co. Ltd. and exhibited no detectable noise.

After the ARRL volunteer wrapped the input and output charger cords several times around ferrite cores the noise was greatly attenuated at the site. More importantly (to the author) the noise was eliminated at his QTH as verified by his XYL who was at home watching the waterfall display and communicating with the author by phone. The ICOM 7300 waterfall display after the ferrite devices were installed is shown in Figure 5. The movement of the noise bands in frequency over time mentioned in the introduction can now be explained as well. It is likely that the movement noted is due to changes in the switching frequency of the power supply required to maintain the battery voltage its optimum voltage. The changing noise amplitude over the day may be explained by variations in the supply's duty cycle also control the voltage generated. The lesson learned here is that if a picket fence noise is observed on a waterfall spectrum and the noise bands tend to move slowly in frequency then the noise source is most likely from a switching power supply of some type.

Given the increasing popularity of E-bikes this noise may soon become a problem that will need to be reckoned with by the FCC and Radio Frequency (RF) users like the noise created by rooftop solar power system microcontrollers.

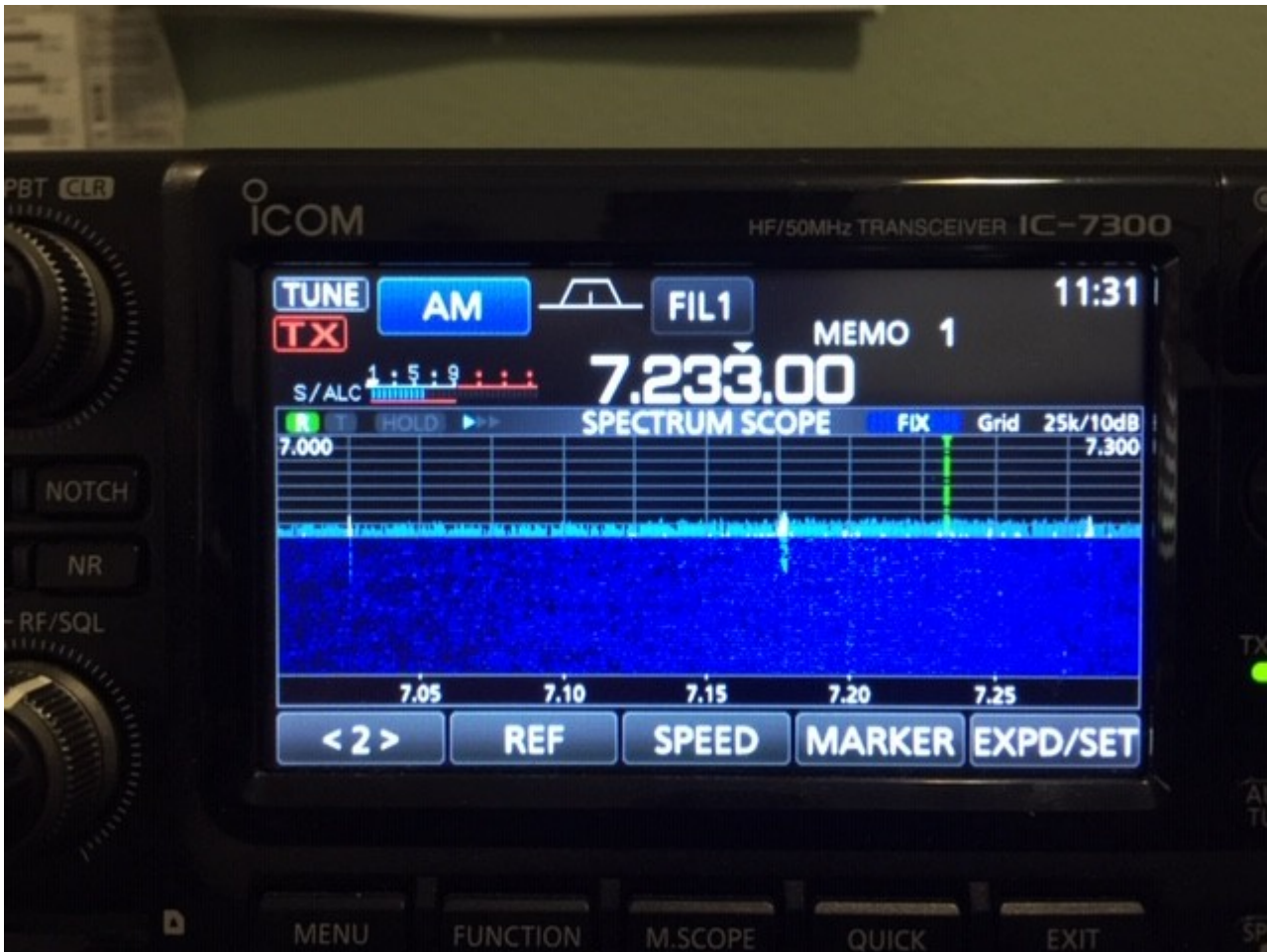


Figure 5. 40 Meter Picket Fence Gone after Identification and Filtering.

Having determined the noise source to be a switching power supply the author did an Internet search on “switching power supply noise on amateur radio bands” and found several U-Tube videos where other amateurs observed the same problem. Two of these videos include:

[https://www.bing.com/videos/search?](https://www.bing.com/videos/search?q=switching+power+supply+noise+in+amateur+radio+bands&docid=608046624478660478&mid=8533D1E50979700800EC8533D1E50979700800EC&view=detail&FORM=VIRE)

[q=switching+power+supply+noise+in+amateur+radio+bands&docid=608046624478660478&mid=8533D1E50979700800EC8533D1E50979700800EC&view=detail&FORM=VIRE](https://www.bing.com/videos/search?q=switching+power+supply+noise+in+amateur+radio+bands&docid=608046624478660478&mid=8533D1E50979700800EC8533D1E50979700800EC&view=detail&FORM=VIRE)

[https://www.bing.com/videos/search?](https://www.bing.com/videos/search?q=switching+power+supply+noise+in+amateur+radio+bands&docid=608050296680939871&mid=8E490798632FACC16CD28E490798632FACC16CD2&view=detail&FORM=VIRE)

[q=switching+power+supply+noise+in+amateur+radio+bands&docid=608050296680939871&mid=8E490798632FACC16CD28E490798632FACC16CD2&view=detail&FORM=VIRE](https://www.bing.com/videos/search?q=switching+power+supply+noise+in+amateur+radio+bands&docid=608050296680939871&mid=8E490798632FACC16CD28E490798632FACC16CD2&view=detail&FORM=VIRE)

The first video shows the spectrum from the amateur radio operator created by a switching power supply in his shack. It is very much like that shown in Figure 1 (interestingly enough, the waterfall display is from another ICOM 7300 Software Defined Receiver). The second video identifies other types of noise sources in a home that many

**Contacting Soara:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690  
Send e-mail to [membership@soara.org](mailto:membership@soara.org) or leave a message at 949-667-0173  
Facebook: K6SOA Twitter: @K6SOA



amateurs may not be aware of. More importantly, it shows how to reduce background noise in an amateur band to S2 to S3 levels from S5 or higher. The conclusion of this effort is that those amateurs who are experiencing high background noise at their location may be surprised on how noise identification and proper filtering can improve their transceiver's performance.

Lastly, most of the solutions for RF noise involve the use of circular ferrite toroids or ferrite clamp-on filters. An excellent source and information on how to install the ferrites can be found at the Palomar Engineers company website

<https://palomar-engineers.com/ferrite-products/ferrite-cores/ferrite-ring-toroid-combo-pack>.

The author wishes to thank the local ARRL monitor for identifying the noise source and the cooperation from the home's resident allowing the offending device to be modified. The resident's help resulted in ensuring communication over the entire amateur 40-meter band and frequencies used by emergency services and other agencies using radio communication to accomplish their missions.

### **Footnotes**

1. For the highly observant reader Figure 1 also shows a second picket fence noise with vertical bands appearing every 16 kHz across the 40-meter band. This noise was not investigated in detail but was found to be correlated with a two-stroke gasoline powered weed eater clearing brush from a lot across the street from the stronger noise location. This noise disappeared when the operators quit for the day providing more support that the noise was being generated by the weed eater. Solving this problem is a job for the future.
2. The new ARRL Volunteer Monitor program replaced the prior Official Observer program at the beginning of 2020. The program is a formal agreement between the FCC and ARRL in which volunteers trained and vetted by the ARRL will monitor the airwaves and collect evidence that can be used both to correct misconduct or recognize exemplary on-air operation. Cases of flagrant violations will be referred to the FCC by the ARRL for action in accordance with FCC guidelines.
3. Help with this kind of interference issue is really the job of the ARRL Section Technical Specialist (TS). However, since there is nobody assigned to the TS position in the Orange section, the local Volunteer Monitor offered to assist.

**Charlie KC6FZY**

## [TV Twinlead Antennas](#)

Heiko, AD6OI and Brian, NJ6N pointed out an article [written by Frederick R. Vobbe, W8HDU on January 3, 2008](#) for those who may want a dipole antenna that is easy to construct and deploy.

Heiko used the variation described in figure 2. For the 10M antenna I cut it to 16 ft 8 inches total length.

## [SOARA Nets](#)

We are running a number of nets on our repeaters to help all of us stay in touch and keep ourselves occupied while we are mostly staying at home. Except as noted below, the nets are held on the 2M (147.645) and 70cm (447.180) linked repeaters.

Some of these are what we have been doing for a while such as the Tuesday night 2000 net on the 2M/70cm repeaters, the Dstar net Wednesday nights at 2000 on 146.115 MHz and the HF nets on Saturday 40M (7.200 MHz) at 0800 and 10M (28.415MHz) at 0900.

There are new nets as well:

Astronomy Net - Wednesday evening at 1900 on 146.115MHz (Dstar)

Dinner Net - Friday evening at 1900 on 2M/70cm

Tech Net - Saturday morning at 0900 on 2M/70cm

**Dale, W6EDT**

## [GotoMeeting Information](#)

WHAT TO EXPECT MONDAY EVENING

When you join Monday's meeting, it is highly recommended you use Google Chrome if you plan on entering via browser. It is also recommended to use a headset or earbuds with a mic. Avoid a laptop mic as the speakers that sit right next to the mic tend to produce echo and feedback. Your webcams will be disabled.

The meeting will be locked in order for Soara Board members and our Presenter to arrive first. Please email me if you would like to make an announcement to the other members so I'll know in advance to call on you. You will be in a waiting room until 7pm when I'll open up the meeting. Please keep your microphones muted when not talking. I will Mute all attendees if there is an unmuted mic disrupting the meeting.

You can use the Chat feature to request to ask a question. When, acknowledged, you can unmmute your mic and ask away. You may ask the question in the chat if you prefer and we'll ask the question for you. You may comment as well if you like, just keep it clean. You can also chat with a specific individual privately. Just be sure of what you are saying and where it is going.

**Contacting Soara:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690  
Send e-mail to [membership@soara.org](mailto:membership@soara.org) or leave a message at 949-667-0173  
Facebook: K6SOA Twitter: @K6SOA

As this meeting is open to the public and announced as such on the website, we expect a smooth meeting. If we, by chance, get a disruptive guest they will be Dismissed from the room by the Moderator and the meeting room will then be locked to prevent re-entry.

Let's have a great online meeting!

## Erik, W6INE

Some additional notes from Dale Tyler. Meeting details and links, etc. will be sent out Monday afternoon and will also be available on the soara.org website.

So far, the only browser that I have seen work is Chrome. The meeting link will look something like SoaraMeeting\_**subject to change - check email or soara.org**). When you follow the link you will see a screen similar to this:

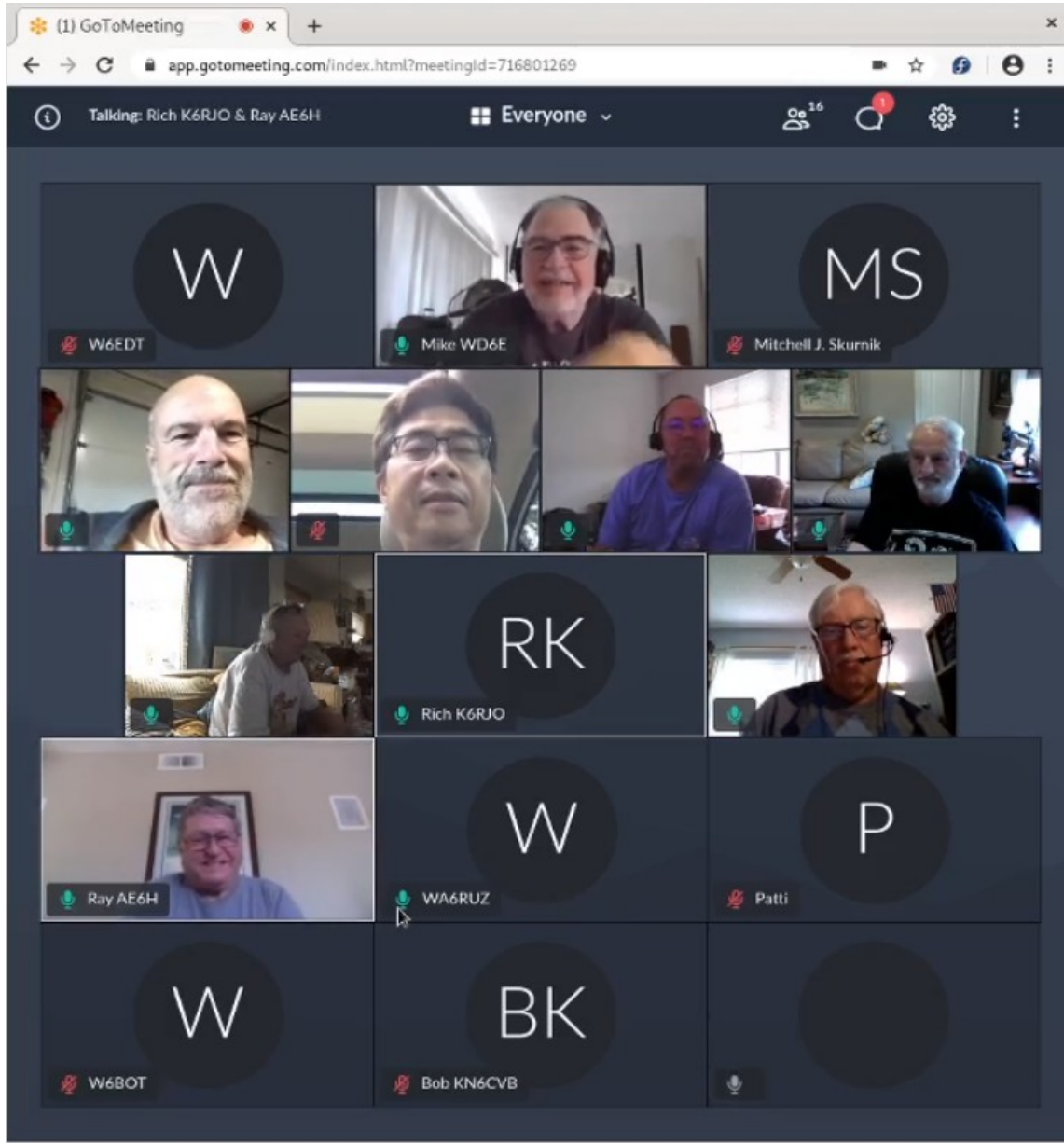
The screenshot shows a GoToMeeting interface for a "Practice Meeting Room". At the top left is the "GoToMeeting by LogMeIn" logo. The main content area has a white background with the title "Practice Meeting Room" in a large, grey font. Below the title is a circular profile picture of Erik Wresch. Underneath the photo, his name "Erik Wresch" is displayed, followed by his title "VP - South Orange Amateur Radio Association" and his location "Mission Viejo, California". A link for "About Me" is visible below the location. At the bottom of the main content area, there are two buttons: a blue button labeled "Join My Meeting" and a red-outlined button labeled "Join Meeting In Browser". The footer contains navigation links: "My GoToMeeting", "About Us", "Terms of Service", "Privacy Policy", and "Support". A small disclaimer at the very bottom states: "All OpenVoice audio conferencing services are provided by LogMeIn Audio, LLC. LogMeIn Audio, LLC is the telecommunications provider and is responsible for the rates, terms, and conditions of the audio conferencing services. © 2020 LogMeIn, Inc. All rights reserved."

**Contacting Soara:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690  
Send e-mail to [membership@soara.org](mailto:membership@soara.org) or leave a message at 949-667-0173  
Facebook: K6SOA Twitter: @K6SOA

Be sure to choose "Join Meeting in Browser". Next you will have an opportunity to enter your name and ID. Please use your callsign for your ID. For example, I used W6EDT and my name was Dale. If you have previously used GotoMeeting, your name and ID will be stored in cookies associated with the site. You may or may not want to change them,

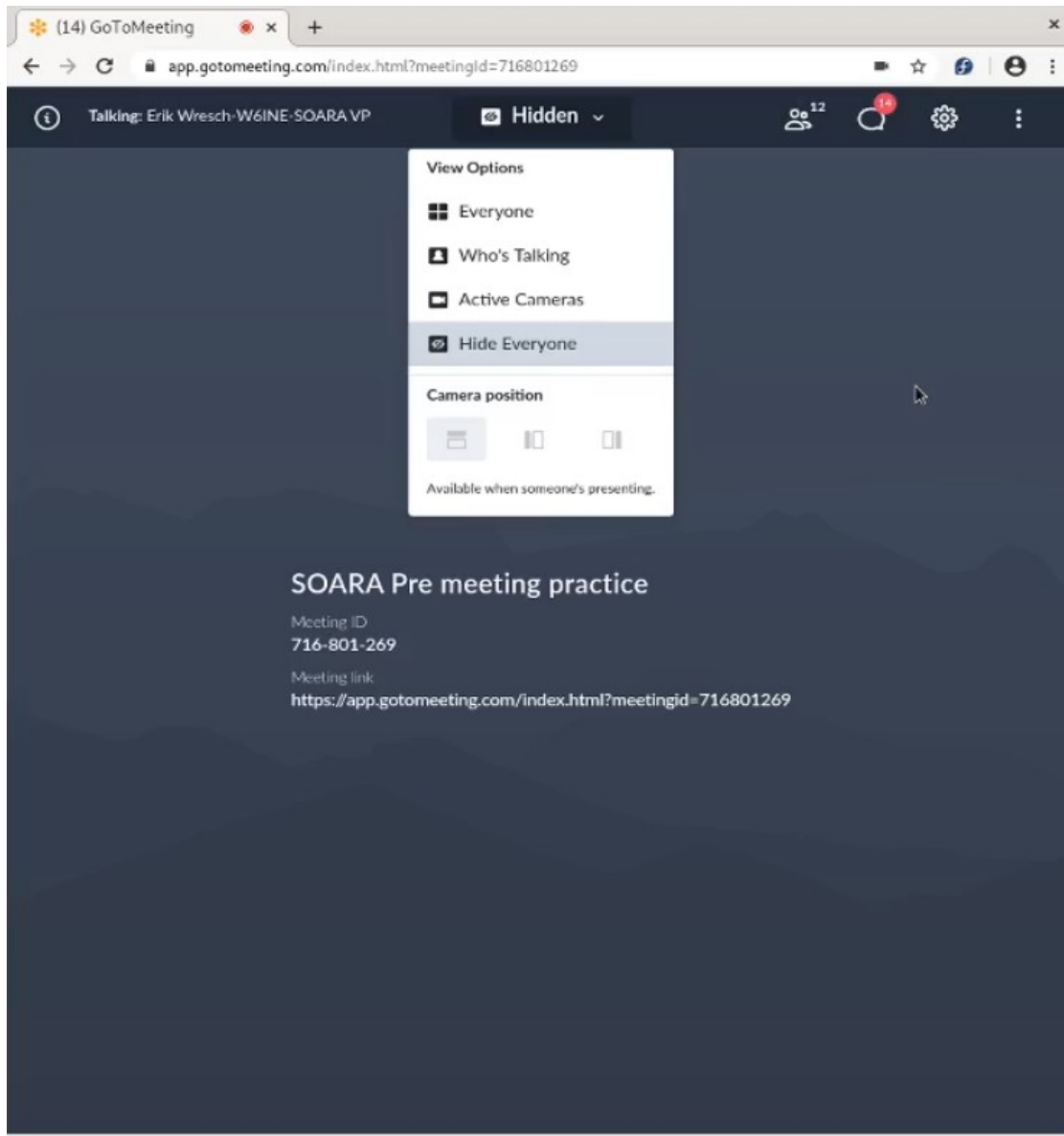
As was mentioned above, a headphone is best, but as long as you do not unmute your mike, the PC speakers will also work.

Once you enter the meeting you will see something like this (I am the "W" in the upper left):



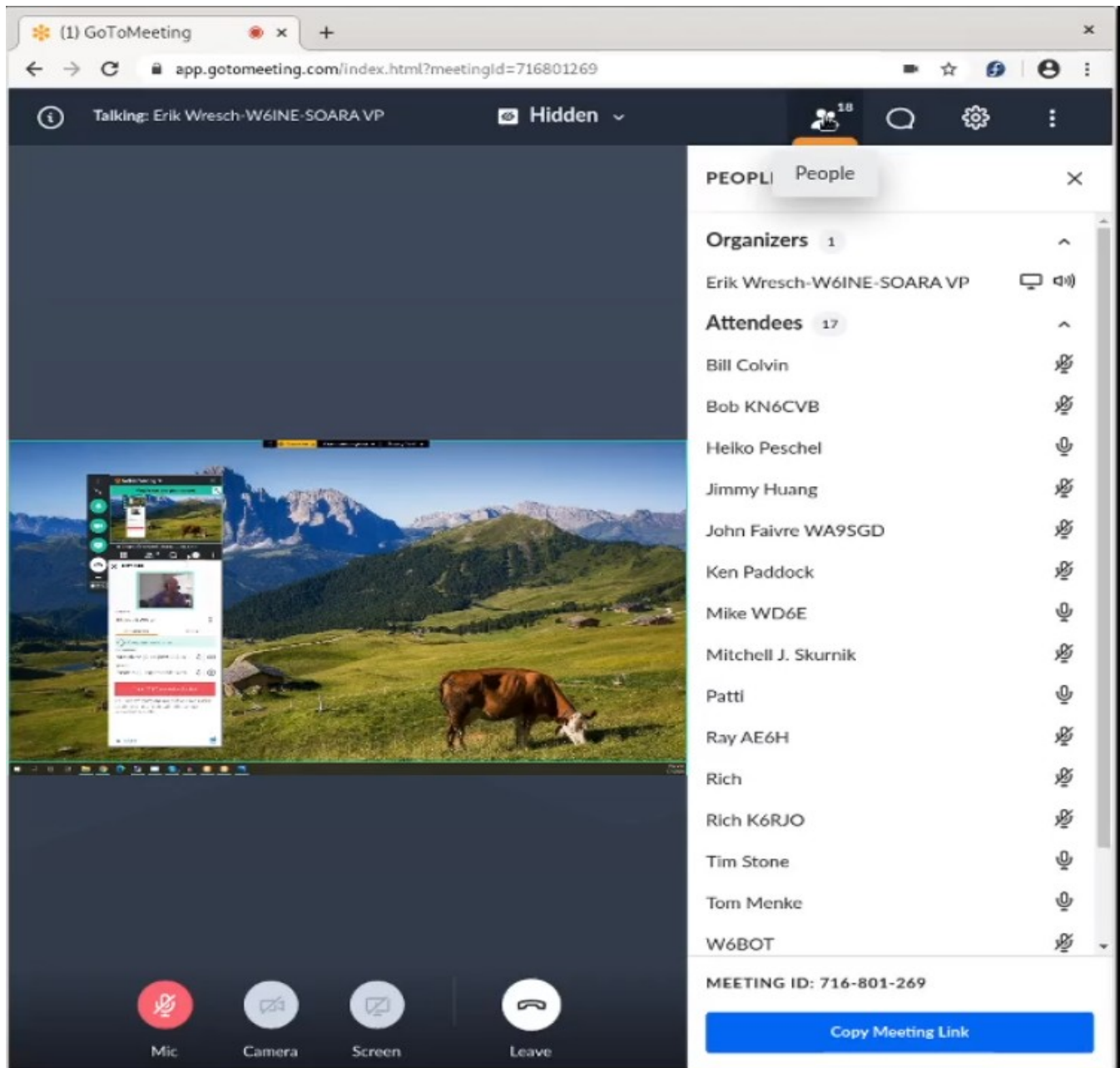
**Contacting Soara:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690  
Send e-mail to [membership@soara.org](mailto:membership@soara.org) or leave a message at 949-667-0173  
Facebook: K6SOA Twitter: @K6SOA

I would suggest you click on 'Everyone' at the top of the screen and change the display to 'Hide Everyone'. This will make the presentation, larger and easier to see.



**Contacting Soara:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690  
Send e-mail to [membership@soara.org](mailto:membership@soara.org) or leave a message at 949-667-0173  
Facebook: K6SOA Twitter: @K6SOA

Finally, if you need to update your name or simply want to see who is logged in, use the people icon at the top right of your screen. To update your name or ID, click on your name and press "Edit" in the drop down menu.



Please leave your Mic icon as shown (muted **RED**), which prevents noise at your location from disrupting the meeting.

There will also be a telephone number you can call on a telephone and an access code to allow you to listen to the presentation, if a computer is not available. Please be sure you have unlimited long distance, as the number will not be toll-free.

**Contacting Soara:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690  
Send e-mail to [membership@soara.org](mailto:membership@soara.org) or leave a message at 949-667-0173  
Facebook: K6SOA Twitter: @K6SOA

If you wish to join the meeting on a phone or tablet, either Android or Iphone, you will need to install the GotoMeeting App from you phone vendors approved 'store' The App is free, but may require certain permissions to function.

If you need help getting connected, please place a call on the Santiago repeater and I'll try to help you.

Also, if you would prefer to watch a live stream on YouTube, the link will be announced on the soara.org web site. The meeting will be available for playback later on YouTube as well.

This is a great way to participate in our club's meetings even when staying home to be safe.

**73,  
Dale, W6EDT**

### **[SOARA Equipment For Sale Online Site](#)**

Based on numerous requests from SOARA members for a place to post Ham Radio related items for sale to other club members, we have set up an opt-in based Mailman mailing list on our server. Interested SOARA members are invited to join the mailing list. The SOARA organization and Board of Directors do not provide any warranty or guarantee for the items being advertised, buyer beware!

To subscribe, navigate to:

<https://soara.org/mailman/listinfo/forsale>

Enter your "real" email address, not your at "soara dot org" alias. You must be able to send and receive email from the address you provide.

Once subscribed, you will receive email when other members post items for sale. When posting to the list, you should provide an accurate description of the item for sale, its condition, and asking price. Replies to postings should be sent to the poster of the item, and not the list.

The archives of postings are publicly available on the web here:

<https://soara.org/pipermail/forsale/>

This mailing list may be suspended or discontinued at the discretion of the SOARA Board of Directors should that become necessary.

**Brian, NJ6N**

# 2020 SOARA Calendar

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	27	24	16	20	18	15	20	17	21	19	16	-
Program	-	-	-	-	Spring Auction	Field Day Prep	-	SOARA Fair	-	-	Fall Auction	-
FCC Ham Exam 6:00 PM	27	24	16	20	18	At Field Day (2pm)	-	17	21	19	16	-
Education Classes 8:00 AM	Tech 25	General 22	-	-	Tech 16	-	-	Tech 15	Extra 19	-	Tech 14	-
SOARA Elmer Saturday 9:00 AM	11 Murray	8 Murray	14 Gilleran	11 Gilleran	9 Murray	13 Gilleran	11 Murray	8 Gilleran	12 Murray	10 Gilleran	14 Murray	12 Gilleran
SOARA T-Hunt 1:00 pm	-	-	-	-	-	-	-	-	-	-	-	-
Board Meeting	Feb 3	Mar 2	23	27	26	-	27	24	28	26	23	-
Special Events	Quartz-fest 19-25	Yuma 14-16		Visalia DX 24-26	Dayton Ham-vention 15-17	ARRL Field Day 26-28	HRO Ham Jam -	SOARA Picnic 3		JOTA 16-18		SOARA Holiday Party 6
Major HF Contests		ARRL DX-CW 15-16	ARRL DX-SSB 7-8 CQWPX SSB		CQWPX CW 30-31	ARRL Field Day 21-23			CQWW RTTY 26-27	CQWW SSB 24-25	CQWW CW 28-29	
Volunteer Events	OC Chili Run	Paws Fur Pink OC Chili Run	OC Chili Run Baker to Vegas	Dessert Storm Rally Ride for Rwanda	HD Trails OC Marathon LH Marathon	ARRL Field Day 26-28	MV Fire-works 4			Vision Quest		Run for a Claus

Dates subject to Change - Check the SOARA Web Site (<http://www.soara.org>) to verify locations and times

**Contacting Soara:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690  
Send e-mail to [membership@soara.org](mailto:membership@soara.org) or leave a message at 949-667-0173  
Facebook: K6SOA Twitter: @K6SOA



# SOARA Information

**SOARA** meets at the Norman P. Murray Center, 24932 Veterans Way, Mission Viejo, CA on the third Monday of every month at 7:00 PM. For the months of January and February the third Monday is a holiday and the meeting is held on the fourth Monday.



**License Exams:** Amateur License Exams are given prior to SOARA meetings, except June. Exams are at 6pm. Prior registration is not required and walk-in applicants are welcome. For June, exams are held at Field Day. For further information, email Sean Reigle, AJ6B, at [aj6b@soara.org](mailto:aj6b@soara.org).

**SOARA Library:** SOARA has many amateur radio related books such as hand books, books about electrical theory, etc. available to lend out to club members. Contact Heiko Peschel [ad6oi@soara.org](mailto:ad6oi@soara.org) for more info.

**Web Site:** SOARA maintains a web site with current club information. The URL is: <http://www.soara.org/>

**Repeaters:** The Laguna Beach, San Clemente, and Trabuco repeaters are open. The Santiago Peak repeaters are closed. For details or questions on the repeaters contact the repeater director, or [repeater@soara.org](mailto:repeater@soara.org).

2m	—	147.645	-	(110.9)	Laguna Beach
2m	—	146.025	+	(110.9)	San Clemente
2m	—	145.240	-	(110.9)	Trabuco
D-STAR 2m	—	146.115	+	(K6SOA C)	Laguna Beach
220	—	224.100	-	(110.9)	Laguna Beach
220	—	224.640	-	(pvt)	Santiago Peak. (C)
440	—	445.660	-	(110.9)	Laguna Beach
D-STAR 440	—	445.705	-	(K6SOA B)	Laguna Beach
440	—	447.180	-	(pvt)	Santiago Peak. (C)
D-STAR 1.2G	1282.600	-	(K6SOA A)	Laguna Beach	

## Nets:

UHF/VHF (447.180, 147.645 & 224.640): Tuesdays @ 8:00PM

D-STAR (146.115 C module): Wednesdays @ 8:00PM

40 meter HF (7.200 MHz +/- for QRM), Sundays @ 8:00AM

10 meter HF (28.410 +/-) Sundays after the 40m net.

Gordo HF (7.250 MHz +/- for QRM), Weekdays @ 8:30AM



## SOARA OFFICERS

**President:** Ray Hutchinson, AE6H 949-322-8468  
[ae6h@soara.org](mailto:ae6h@soara.org)

**V.P.:** Erik Wresch, W6INE 714-883-7694  
[w6ine@soara.org](mailto:w6ine@soara.org)

**Secretary:** Dave Southworth [ks6rfi@soara.org](mailto:ks6rfi@soara.org)

**Treasurer:** Lori Carey, NI6X 949-444-8190  
[ni6x@soara.org](mailto:ni6x@soara.org)

## SOARA DIRECTORS

**Repeater:** Brian Roode, NJ6N 949-257-2749  
[nj6n@soara.org](mailto:nj6n@soara.org)

**Publications:** Dale Tyler W6EDT 949-360-1717  
[w6edt@soara.org](mailto:w6edt@soara.org)

**Membership:** Ed Barnes, WA6ED 949-468-7706  
[wa6ed@soara.org](mailto:wa6ed@soara.org)

**Education:** Steve Kuver, K6UVR 949-874-1972  
[k6uvr@soara.org](mailto:k6uvr@soara.org)

**Technical:** Tom Hobbs, AE6SH 949-830-8131  
[ae6sh@soara.org](mailto:ae6sh@soara.org)

**Communications:** Heiko Peschel, AD6 949-859-3868  
[ad6oi@soara.org](mailto:ad6oi@soara.org)

## SOARA APPOINTMENTS

**Past President:** Tom Hobbs, AE6SH 949-830-8131  
[ae6sh@soara.org](mailto:ae6sh@soara.org)

**Activities Coordinator:** Dana Wresch, KM6LZG  
[km6lzg@soara.org](mailto:km6lzg@soara.org)

**S. Saturdays:** Ed Barnes, WA6ED 949-468-7706  
[wa6ed@soara.org](mailto:wa6ed@soara.org)

**Raffle:** Bill Colvin KM6FOY [km6foy@soara.org](mailto:km6foy@soara.org)

**Testing:** Steve Kuver K6UVR [k6uvr@soara.org](mailto:k6uvr@soara.org)

**Website:** John Zimmer, KM6BEE  
[km6bee@soara.org](mailto:km6bee@soara.org)

**Ambassador:** Spencer Ammermon, NG6K  
[ng6k@soara.org](mailto:ng6k@soara.org)

**Contacting Soara:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690  
Send e-mail to [membership@soara.org](mailto:membership@soara.org) or leave a message at 949-667-0173  
Facebook: K6SOA Twitter: @K6SOA