



The

May 2020

Propagator

The Monthly Newsletter of the South Orange County Amateur Radio Association

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General Meeting

May 18, 2020
7:00 PM
via
GoToMeeting

President's Message, May 2020

Well, here we are, well into our second month of “Safer at Home” restrictions, and with good reason, IMO. This ordeal has presented some interesting opportunities for we hams however, In addition to now that other distractions like work, travel, large social events, etc., have been severely reduced we find ourselves having a lot more time to spend with our hobbies and passions. This is what I call the COVID-19 silver lining.

The current situation gives us the opportunity to grow and learn in our hobby, to improve both our technical and operating skills, and time to delve into those things we've been wondering about. Fortunately, our hobby, unlike many others, can be done with appropriate infection precautions, like remaining mostly at home, and when we must venture out, to utilize distancing, masking, etc. I have a few radio related kits I have acquired, and I now have the time to start building them and experimenting.

Ham radio also gives us lots of opportunities for social interaction from the safety of our own homes. For instance, a number of nets, have sprung up on all bands, V.U, and HF., and participation on these new as well as existing nets has definitely increased. SOARA has instituted several: the every Saturday am Technical Net at 0900, the Friday evening “Wine and Dinner” net, a new astronomy net on D-Star on Wednesday evenings, to name a few. I have found several stay at home nets on HF, along with the regular HF nets, like the “Gordo Net” on weekday mornings and of course the SOARA HF and 10 meter nets on Sunday mornings. Informations as to times and frequencies for the above are on the SOARA website.

So, again, let's turn this limiting situation into a silver lining, and let's get more Radioactive!

73, and looking for your check ins on a net near you!

**Ray, AE6H
SOARA President**

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

[General Meeting - May 18 via GotoMeeting](#) [Digital Modulation](#)

Join us online via GoToMeeting for our May SOARA Meeting as we welcome back **Mike Pettus WD6E**.

Mike will be describing the basics of modulation in general, from CW keying, analog modulations AM, FM, digital types FSK, MSK, etc., up through techniques that get us to modern quadrature modulation that's used in all digital communications today. He will start with how to modulate a radio carrier and end up with QAM technology. He will also show some recent field tests that have done using 80 GHz carrier frequencies and modulation up to 128 QAM which is how we get to 10 Gbps over the air. If you didn't hear Mike's presentation on Millimeter RF, then you should not miss this one.

Join the meeting using Chrome on Windows, Mac or Linux: [General Meeting](#) There are more details on how to join SOARA GotoMeeting in the **GotoMeeting Information** article, below.

Erik, W6INE

[Membership Report](#)

We are currently at 216 active members. If someone wants to join SOARA we have made it a bit easier during shelter at home. The application signatures have been temporally waived. So, the process is: fill out the application, send it to membership@soara.org, pay your new member dues & initiation fee \$90, when the board next meets we will review and vote on the application, if approved we will make a membership card and send you the SOARA Repeater User's Guide & Membership Manual electronically in PDF. Now, the hard part. You need to participate!

If you have ideas or want to help SOARA while we are sheltering at home, send the board@soara.org an email with your idea. Erik has been spearheading GoToMeeting for our online meetings whil Murray center is closed. Heiko has been instrumental in adding new nets like the 7pm Wednesday DSTAR Astronomy net, Friday 7pm dinner net, and the 9am Soara Saturday Tech Net. The more participation we have the better radio club we will be. Get RadioActive!

73,
Ed, WA6ED
SOARA Membership Director

[SOARA Elmer Saturday/Tech Net](#)

As you may already know, we have a lot of fun at SOARA Saturday events talking about all types of topics. Everything from FCC regulations, Radio, 3D printing, electronics, setting up your shack, safety, proper radio etiquette, and much more.

We haven't been able to organize in person meetings. However, we have been able to get on the radio and have a directed tech net. This net is occurring every Saturday until we can conduct normal SOARA Saturday meetings. Heiko typically runs net control and Ed logs the net online.

[SOARA Saturday Tech Net Logs](#)

Last week we talked about grounding. (AC & RF grounds, reference to the ARRL Grounding and Bonding book) Previous to that there were interesting questions discussion on antennas. (Reference to the ARRL Antenna book and nanoVNA) I commented on my FTM-400 display getting hot. One person helped me and said, turn down the brightness! Now, I have it as dim as it goes and it's not hot anymore. I guess Yaesu uses tube filament to light the display!

Join us on Saturdays 9am, on Laguna Beach 147.645 or Santiago Peak 447.180 repeaters. And, bring your questions or be there to help others. Or, say hello and listen in!

5/16/2020 SOARA Saturday Tech net, 9am, 1 47.645 and 447.180 repeaters (closed)

Our Logger was not available - there were roughly 12 attendees (Dale)

5/9/2020 SOARA Saturday Tech net, 9am, 1 47.645 and 447.180 repeaters (closed)

1. AD6OI, Heiko (net control)
2. WA6ED, Ed (log)
3. KE6GQO, Monte
4. K6WHC, Scott
5. KN6BMR, David
6. W6SI, Tak
7. KM6FOY, Bill
 - when driving a ground rod into the ground, be sure no gas or water, electric lines to hit. Free call to utilities
8. W6EDT, Dale
9. KN6FOA, Mitchel
10. KK6URR, Russ
11. AJ6LU, Harold
 - Grounding your station
 - ARRL Book on Grounding and bonding
12. K6RBS, Richard
 - RF ground

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- AC ground
 - During storms, ladder line, arcing in tuner, time to disconnect ladder line and ground it.
13. KI6LOM, Jim
 14. AD6OH, Patti
 - 3D printing - Friction welding question
 15. KM6IRT, Peter

5/2/2020 SOARA Saturday Tech net, 9am, 1 47.645 and 447.180 repeaters (closed)

1. AD6OI, Heiko (net control)
2. WA6ED, Ed (logging this page)
3. K6RJO Rich
4. K6BMR David
5. AE6H Ray
6. NR6E Mikkel
7. KM6FOY Bill
8. W6EDT Dale
9. K6RJO Tim
10. KI6LOM Jim
11. NJ6N Brian
12. K6RBS Richard
13. K6UVR Steve

4/25/2020 SOARA Saturday Tech net, 9am, 1 47.645 and 447.180 repeaters (closed)

1. AD6OI, Heiko (net control)
2. WA6ED, Ed (logging this page)
3. W6BIK, Jeff
 - Does a FTM400 need a cooling fan?
 - only if it gets hot
 - display gets warm, need goods air flow dim display, it will run cooler!
 - How much TX power?
 - TX duty cycle?
4. KN6BMR, David
 - Baofang receiver noise
 - led lights
 - out of band noise
 - in band noise
 - try a filter, fun to experiment!
5. KM6FOY, Bill
 - Some Baofangs work better than others
 - For the price, it's what
6. NR6E, Mikkel
7. K6RJO, Rich
8. AI6WE, Mike
9. W6SI, Tak

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10. KC6FZY, Charley
 - WIRES messing up repeater
11. AE6H, Ray
 - set your timeout timer 60-90 seconds. This will protect your radio from a stuck PTT and overheat your radio.
12. G7LWT, Darren
13. KM6HCC, Steve
14. K6RBS, Richard
 - offered to check out David's noise in the area
15. NJ6N, Brian
 - Turn off WIRES
16. W6EDT, Dale
 - 3-5 impulses of noise, something oscillating, need trouble shooting ideas
 - goes away at 1 watt
 - 1 second after key up, wide band
 - centered on discrete frequencies
 - happens on two radios
 - happens on different antennas
 - 40 - 15 meters
 - 1-5 seconds in a series after tx stops.
 - check coax? (from Bill)
 - Radio a & b pick up each other issue
 - Flex & 7300
 - Try CW keyer, with directional antenna
 - something storing energy and then re-radiating?
17. K6FTL, Alex

73,
Ed, WA6ED
wa6ed@soara.org
SOARA Elmer Saturday Grand PooBah
I Yaba-Daba Doo!

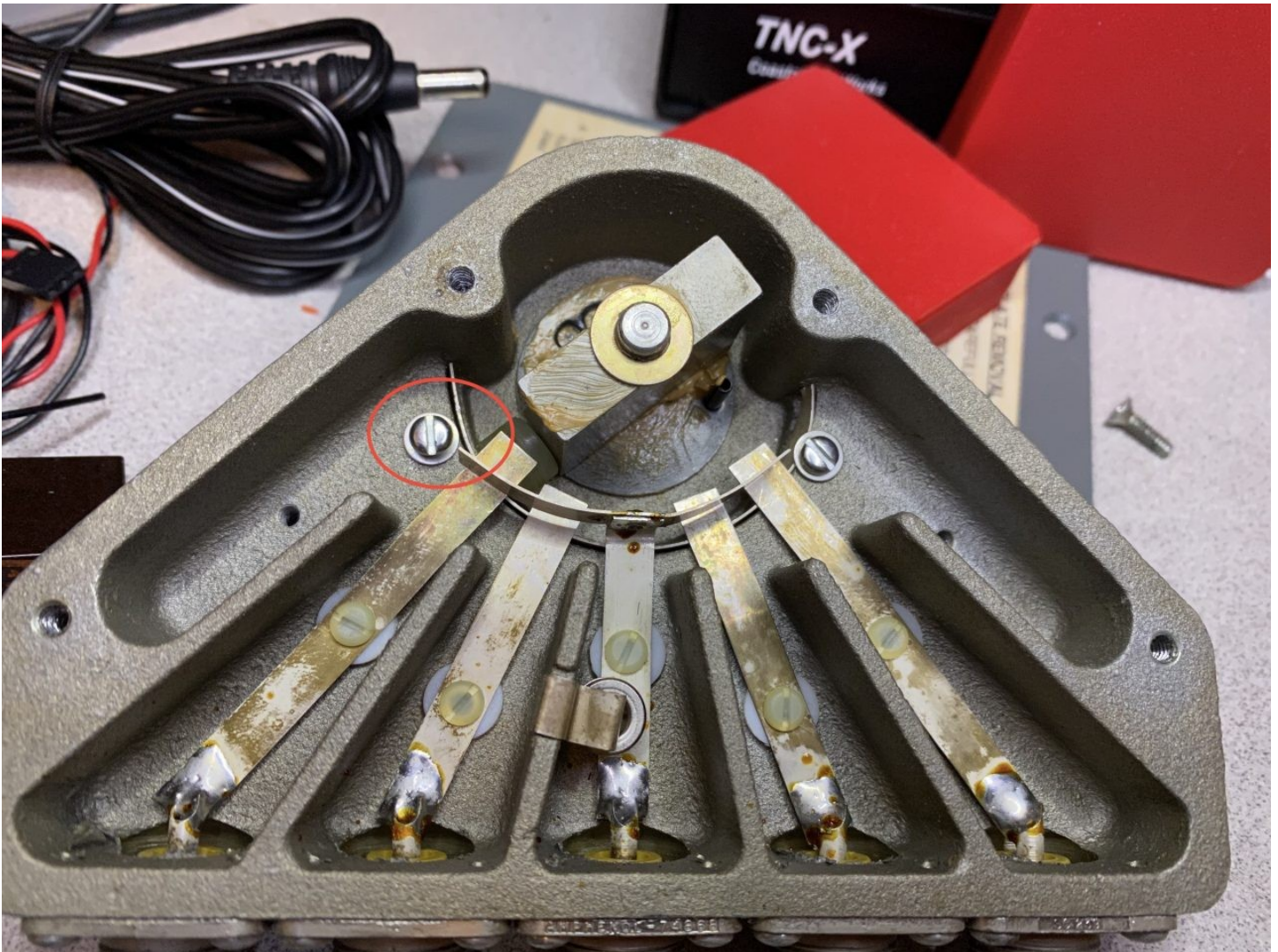
[Troubleshooting Alpha-Delta Coax Switches](#)

I have one primary HF antenna, a Hustler 6BTV (6 band trap vertical). I was using an Alpha Delta 4-port coax switch to switch the antenna between my K3, K2, and coax that I use on the workbench. This morning when I listened for the SOARA 40 meter net, signals were very weak. SWR was very high when I tried to transmit. I removed the switch and replaced the K3 position with a SO239 barrel connector and that resolved the problem.

I used a digital VOM to test the ports on the switch and found ports 3 and 4 (K3 and K2) to be shorted out while activated! After opening up the switch, I found out why.

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The busbar that provides grounding for ports that are not activated was higher on the port 3&4 side than the port 1&2 side. This was caused by the screw and washer that were supposed to hold the bar down being located too far away to engage the bar. A manufacturing defect.



I attempted to email the company but both of the email addresses they list on their web site are no longer valid.

Buyer beware! If you have a Delta4, you might want to take a look inside to see how it is constructed and make sure it doesn't have this defect.

I have more articles at <https://blog.nj6n.com/index.php/2020/03/01/alpha-delta-coax-switches/>

Brian, NJ6N

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Stay at Home T-Hunting

Erik, W6INE organized a T-Hunt where we could participate from home. He hid the 5W T-bug in Mission Viejo and then challenged each of us to take as precise a bearing as possible from our homes and announce those bearings on the 440 SOARA repeater. The T-Hunt started at 0800 on 5/16, before the Tech Net and he announced the final location after the Tech Net.

At least 6 people participated, from South Mission Viejo, Irvine and San Clemente as well as a mobile unit. As the bearings were reported and refined the location was guessed to be at the MV Community Center by some participants. The actual location was 33.6386075,-117.6532387 in North Mission Viejo at a high elevation. The main reason for the incorrect guess was a lack of accurate bearings coming from a significant angle from other bearings. The guessed location was on very nearly the same bearing as the actual bearing to the T-bug.

This event was a lot of fun and I learned a lot. This is a useful skill to improve because it can be used to locate lost hikers or downed aircraft with a beacon. We need to pay attention to compass correction (declination, which is about 11.65 degrees in Mission Viejo). I was also surprised by the low signal strength on my VK3YNG "Blue Box" Ssniffer 4 which showed a high "2" maximum, compared to a TH-D74 which showed full scale receive, even with 20dB attenuation. The was using a 10 element beam, vertically polarized.

I hope we do more of these activities and even some real T-Hunts as restrictions on gatherings are loosened in Orange County.

Dale, W6EDT

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

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[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 unmute 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.

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 <https://www.gotomeet.me/ErikWresch/SoaraMeeting> (**subject to change - check email or soara.org**). When you follow the link you will see a screen similar to this:

Practice Meeting Room



Erik Wresch

VP - South Orange Amateur Radio Association

📍 Mission Viejo, California

[About Me](#)

Join My Meeting

Join Meeting In Browser

[My GoToMeeting](#) [About Us](#) [Terms of Service](#) [Privacy Policy](#) [Support](#)

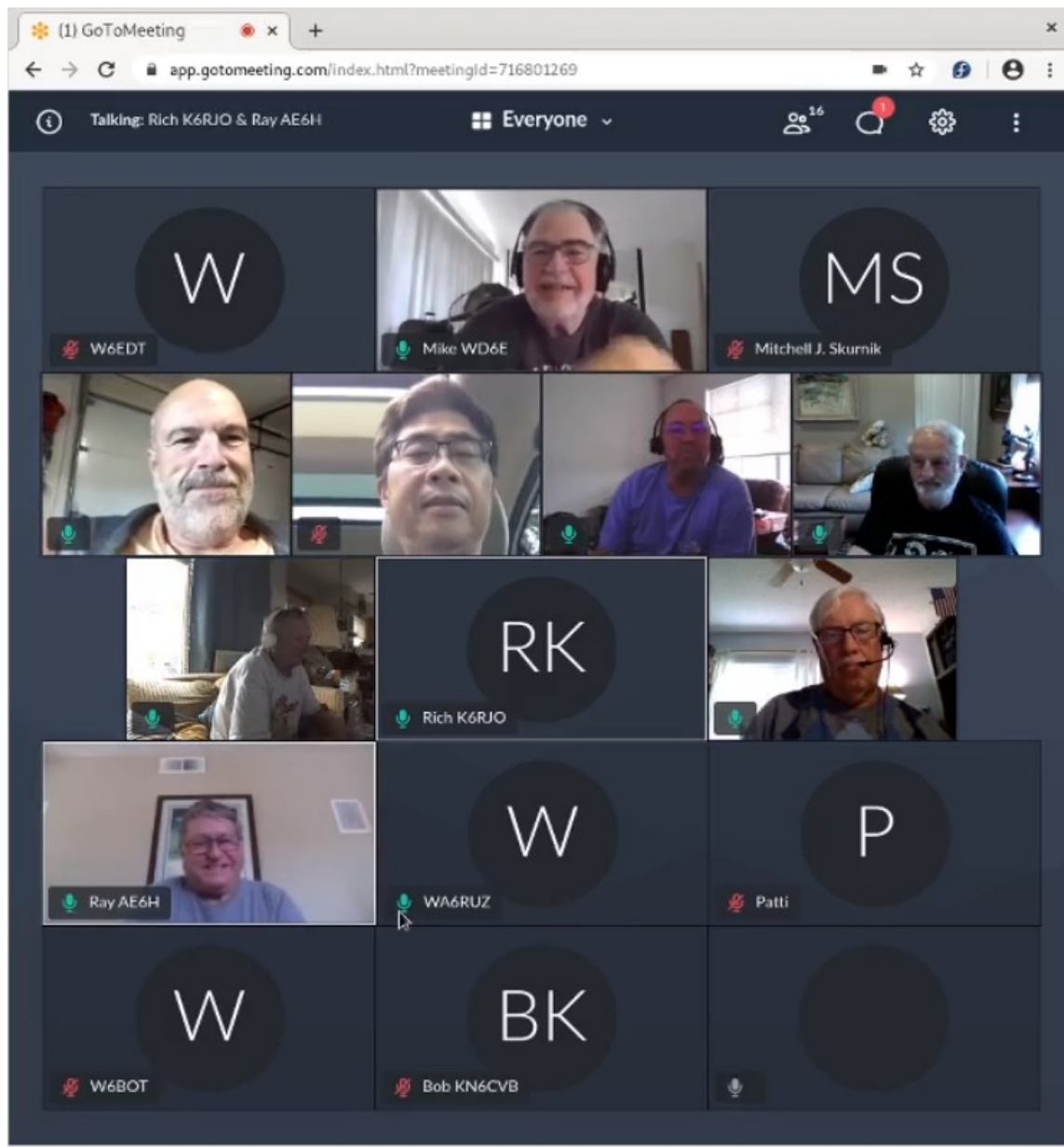
All OpenVoice audio conferencing services are provided by LogMeIn Audio, LLC. LogMeIn Audio, LLC is the telecommunications provider and is responsible for the rates, terms, and conditions of the audio conferencing services. © 2020 LogMeIn, Inc. All rights reserved.

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.

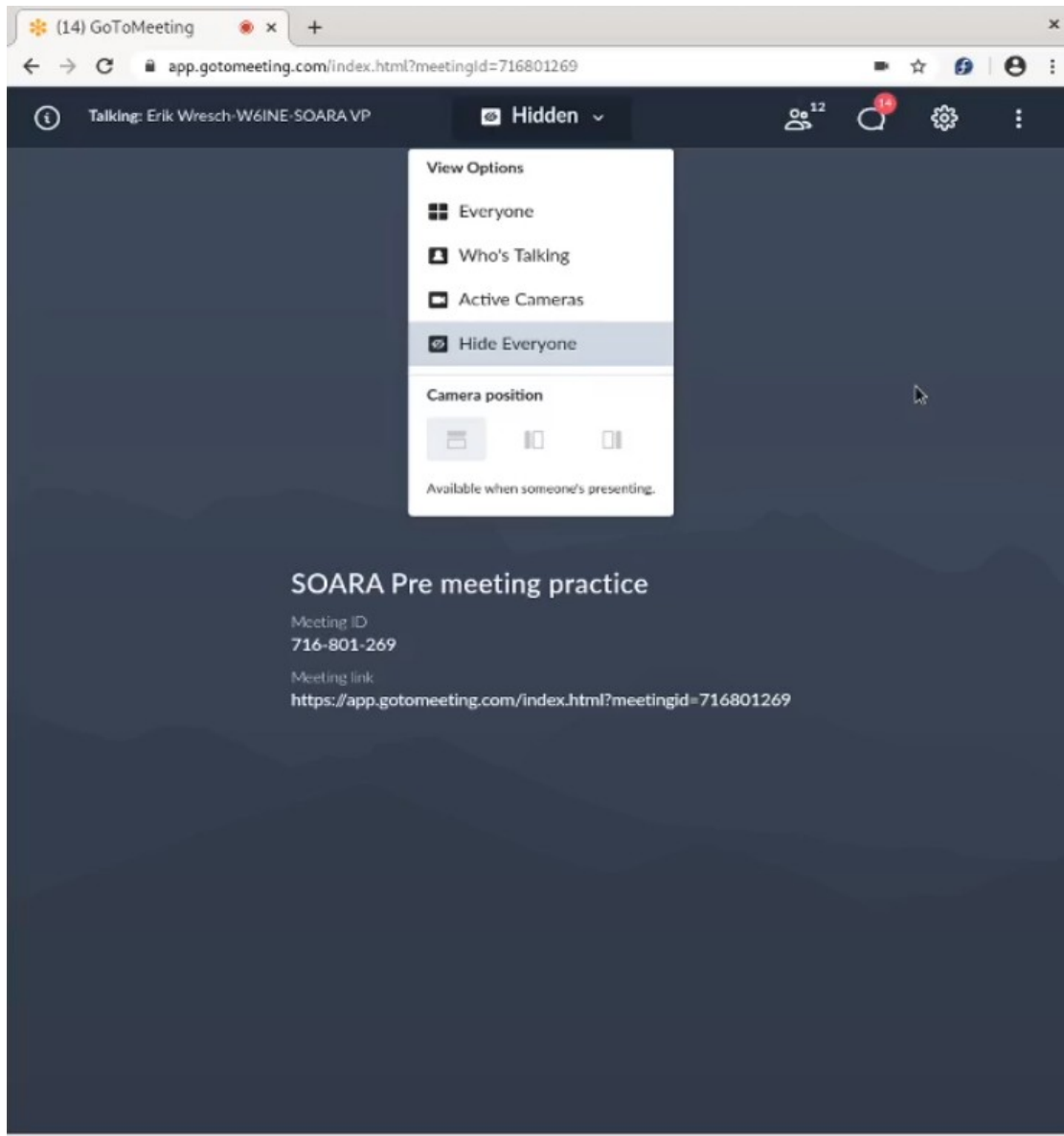
Once you enter the meeting you will see something like this (I am the “W” in the upper left:

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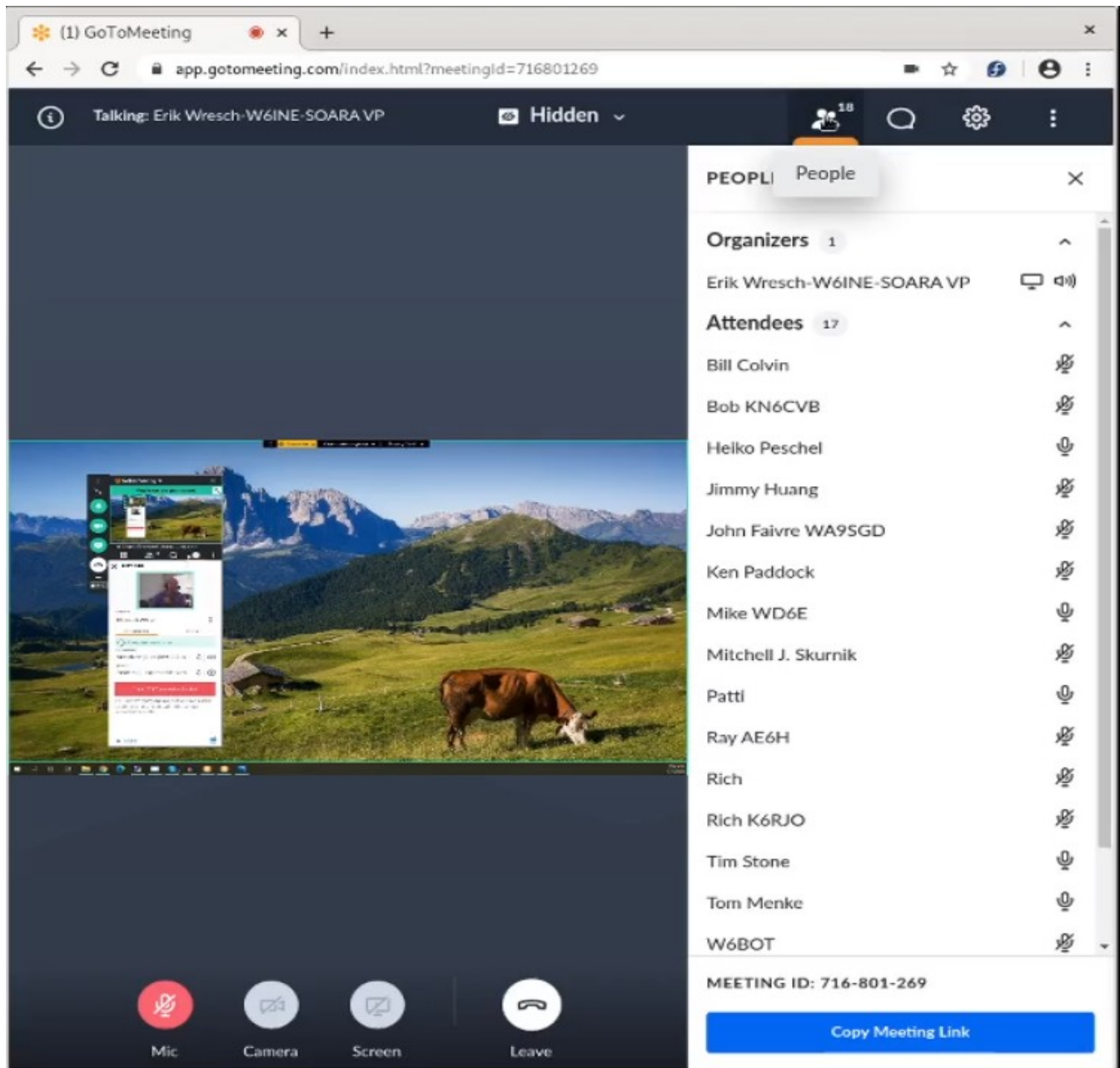
I would suggest you click on 'Everyone' at the top of the screen and change the display to 'Hide Everyone'. This will make the presentation, larger and easier to see.

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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.

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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)	20	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

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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.

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 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.

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



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Testing: Steve Kuver K6UVR k6uvr@soara.org

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