

The January 2021

Propagator

The Monthly Newsletter of the South Orange County Amateur Radio Association

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General Meeting
January 18, 2021 7:00 PM

via <u>GoToMeeting</u>

Presidents Message - January 2021

A I like others, hope that 2021 will bring us a much improved ability to gather, earn and move forward with the in person Amateur Radio activities. Field Day, SOARA Saturdays, General meetings, picnics, banquets, all, for me at least, greatly enhance my growth, understanding, and enjoyment of our hobby and service. I'm betting most of you feel the same way. With the Murray Center planning to potentially open in March, SOARA has submitted out annual room reservations request for all of our former regular recurring meetings, classes, testing, Elmer Saturdays, etc,

One very important thing, of which II want to assure our members, is that SOARA will proceed in our return to in-person events and normalcy, ONLY when the science and best medical advice says we can safely do so. In the best interests of our members and their health and safety, I assure you, we will act with an abundance of caution, and proceed slowly and with deliberation. Your wellbeing will be the determining factor. Of course, just as in pre- Covid times, if an individual isn't comfortable with the arrangements, activities, or settings, we will certainly understand if they still wish to limit their own participation.

This is requiring SOARA to do dual path planning for the year. One path, as if we will return to in-person events at some point, and the other, as if we will have to continue along the virtual activity path for an indeterminate time. Flexibility and adaptation is the key, but I'm sure we'll be able persevere and overcome. It's in the nature of Hams and our avocation.

73 to all, and here's to a greatly improved 2021 for all!

73 to all, Ray, AE6H

Monday, January 18th at 7pm. General Meeting with Guest Speaker Bill Shanney W6QR

Please join us online for our January 2021 General Membership Meeting to be held on the GoToMeeting platform.

Our guest speaker this month will be Bill Shanney W6QR to give a presentation on VHF/UHF Weak Signal Propagation. Bill has been a ham since 1961 when he was a freshman in High School in NJ. He is now a retired electronics engineer having spent 45 years working on RF and microwave circuits and systems for satellites. He operates 95% CW on the HF bands. He was very active on VHF/UHF about 30 years ago and has stayed active on 6M Sporadic E. When the pandemic started and we had to stay home, he decided to give it a try again. This presentation is a summary of what he did and learned in 2020. We hope you will join the meeting and hear what Bill has to share with us.

Out 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.

This is the <u>link</u> to joining the meeting or you may call in by phone **408-650-3123** using this Access Code: **888-930-813**

Erik, W6INE

My Introduction to HF

I've wanted to get on the HF bands ever since earning my General Class license several years ago, but I was hesitant about investing in the equipment without knowing what to expect. I had the opportunity to give it a try last fall thanks to the generosity of SOARA and the efforts of Heiko – AD6OI and Ray – AE6H who arranged for the loan of the club's IC-701. My experiences taught me a lot about amateur radio, improved my ham techniques and gave me a start on bands I wouldn't have otherwise gotten onto. Like they say, listen before you talk, but in my case, it was also read before you hook up. I read the radio manual, ARRL articles and books, watched videos and spoke with club members and other hams to get advice and suggestions about setting things up. Armed with as much knowledge as I could muster, I connected the radio, the power supply and the antenna and started listening.

This worked much better than I expected and I immediately heard stations all over North America. After several days of noting active frequencies and logging the stations, I tried making my first contacts. This didn't work as well as I expected and my few returned signal reports were in the 1-2 and 2-2 ranges for SSB phone. Club members who graciously offered to monitor for my transmission didn't pick me up and I also couldn't to hear my own signal on regional web based SDRs.

After more research and testing I discovered my signal was getting out, but not getting received well, probably due to my QTH, a mid-building high rise apartment near John Wayne Airport, and a lack of experience putting things together. I wasn't too surprised or disappointed and was grateful for the learning experience. I returned the equipment to the club after learning all that I could so that the next interested ham can have his or her turn with it.

I feel very comfortable using the HF bands and will return to them. My everyday UHF/VHF techniques have improved and I feel more a member of the amateur radio community for giving it a go. Thanks to all of the SOARA members, Ham Radio Outlet associates and QRZ.com blog members who provided the valuable information that helped me along. I hope I can do the same other hams in the future.

John Yamanaka N6TIK

<u>Temple Hill Repeater Site Upgrades</u>

SOARA has seven repeaters at the Temple Hill repeater site in Laguna Beach. Four of them are D-STAR digital repeaters. There are D-STAR modules for 2m, 440, and 1.2 GHz Digital Voice (DV) and one for 23cm Digital Data (DD). The three analog repeaters are on 2m, 220, and 440.

An **svxLink** node provides EchoLink and inter-site linking over the Internet. Motorola UHF radios provide an RF link to a pair of repeaters on Santiago Peak. The analog machines are interconnected via a Link Communications RLC-3 8-port repeater controller.

Much of this equipment has been running at this site for many years. SOARA has purchased newer equipment to replace the analog repeater systems.

<u>Current Repeaters</u>

Note: A "repeater" consists of transmitter and receiver radios along with (often large) duplexer or "cavity" filters that allow for full duplex operation, transmit and receive antennas or a single combined antenna. Lastly, the receiver and transmitter are interconnected by a repeater controller that manages the audio path.

<u>2 Meter Repeater</u>: The previous **Yaesu/Vertex FTR-2410B** (circa 1980's) repeater was recently replaced with a newer **Vertex VXR-5000V** (circa 1990's). The newer repeater included a 30 watt PA and so the external Hamtronics PA on the old machine was decommissioned.



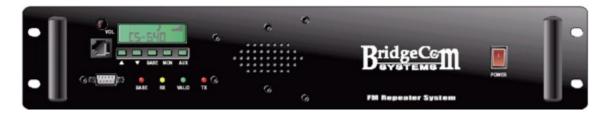
From Top: FTR-2410 2 Meter Repeater, VHF & UHF Power Amplifiers, FTR-5410 UHF repeater, Maggiore 220 Repeater

The current analog UHF repeater is an **FTR-5410** (circa mid-1980's) with an external Hamtronics Power Amplifier. The current 220 repeater is a **Maggiore Labs Hi Pro R1 Repeater** (circa mid-1990's).

New Equipment

As noted earlier, a **Vertex VXR-5000V** was installed in October, 2020 to replace the VHF repeater. We have procured a **BridgeCom BCR-220** repeater to replace the Maggiore repeater and a **BridgeCom/ComLink CS-540U** to replace the **FTR-5410** repeater. A new **RLC Club Deluxe II** repeater controller will replace the **RLC-3** controller.







Top: BridgeCom BCR-220, Middle: BridgeCom CS-540U Bottom: RLC Club Deluxe II

The process of replacing the repeater controller consists of designing and building the necessary audio/control signal interface cabling between the repeater radios and repeater controller. The repeater controller needs to be configured for the specific hardware requirements of each connected radio, e.g. PTT/COR "active high/low" polarity. Timers, macros, IDs, announcements, etc. need to be configured in the new controller.

Audio levels for the each transmitter and receiver must be carefully adjusted in the controller such that any repeater radio on any port can be linked to any other port with the levels remaining consistent. Once everything is interconnected, it must be tested before finally installing the new equipment at the repeater site.

At Temple Hill, the current standard for interconnections between the repeater radios and repeater controller is through an RCA connector patch field. The plan is to replace this patch field with direct cabling between each repeater radio and the controller, using "D-Subminiature" connectors and the RLC repeater controller wiring standard. The new Vertex repeater has already been installed in this manner.



Current Status

The new RLC controller, repeater radios, link radios, and svxLink interface have been assembled on the bench and I am in the process of programming the new repeater controller and adjusting audio levels, deviation, etc. It will be 2-3 months before all of the new equipment will be installed at the repeater site but you may hear some of it on the air from my QTH ahead of that.

Vy 73, Brian NJ6N

SOARA Can Help You Get on HF

This is for all who would like to get into HF but aren't there yet. Many of you may not be aware that anyone with an amateur radio license can get on the air on H.F. On 10 meters you can do RTTY and data between 28.0 and 28.3 and SSB phone between 28.3 and 28.5. You can also do CW on 15M, 40M, and 80M and this can be done with the aid of a computer as one of our members demonstrated before he upgraded to Extra.

All that is required is a basic H.F. rig set up and an antenna. Speaking of antennas it is very easy to build a 10M half wave dipole antenna. I can show you how to do this for the price of a connector or a 1 to 1 balun, or even just a piece of coax with an SO-239 connector.

SOARA has a complete H.F. station that can be lent out to an interested member. I am available for consultation on this subject and there is lots of wire here available to build antennas. If you have questions please get in touch with me at <ad6oi@soara.org>.

Heiko AD60I
Director of Communications for SOARA

SOARA Elmer Saturday/Tech Net

We have fun at SOARA Saturday events talking about all types of topics. Lately, lots of Q&A on antennas. Since we can't meet in larger numbers at the Murray center or Gilleran park, we are having virus free radioactive technical nets. The log is here: https://www.soara.org/soara-saturday-log/ I try to post useful on-topic links in the log. Worth a look.

Join us Saturdays 9am, on Laguna Beach 147.645 or Santiago Peak 447.180 repeaters. Bring your questions, be there to help others, or listen in. Try having some radio fun!

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

If you need an Elmer go to Elmer's corner tab on SOARA's main page.

73,
Ed, WA6ED
wa6ed@soara.org
SOARA Elmer Saturday Coordinator

SOARA Membership Report

October is when all membership dues are due. I just sent reminders a few days ago. If you haven't payed your SOARA membership dues please do so now. Let me know if you do not plan to renew and I will inactivate your account and you will not receive further reminders.

Please read your dues email, about half way down, it shows how much you owe. Many new members and some older members may have a significant dues balance. This balance is based on the way we prorate the dues.

When paying online with Braintree, If you have an odd dues balance, simply select pay other amount. I will figure it out. If you pay by check, we have to go get the check from the PO box. Sometimes it takes awhile.

We are now at 232 active members with 201 paid dues already! Thank you for paying dues quickly. I plan to send another dues reminder near month's end.

Welcome to SOARA!

- KQ6WZ, Tom
- KN6MJO, Glenn
- W6TRG, Tom

If You know someone that wants to join SOARA, the application signatures have been temporally waived by the board. Applications are available on www.soara.org. The process is: fill out the application, email it to membership@soara.org, pay your new member dues & initiation fee \$90, when the board meets we will review and vote on your application.

73, Ed, WA6ED SOARA Membership Director

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 Sunday 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

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

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

ARRL on the Purpose of Amateur Radio

For over 100 years amateur radio and ARRL — the National Association for Amateur Radio® — have stood for the development of the science and art of communications, public service, and the enhancement of international goodwill. Amateur Radio's long history and service to the public has solidified the well-earned reputation that "Amateur Radio saves lives."

Amateur Radio Operators, due to their history of public service, their training, and the requirement that they be licensed by the FCC have earned their status as a component of critical communications infrastructure and as a reliable resource "when all else fails."

Amateur Radio is about development of communications and responsible public service. Its misuse is inconsistent with its history of service and its statutory charter. ARRL does not support its misuse for purposes inconsistent with these values and purposes.

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 guestion. When, acknowledged, you can ummute 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!

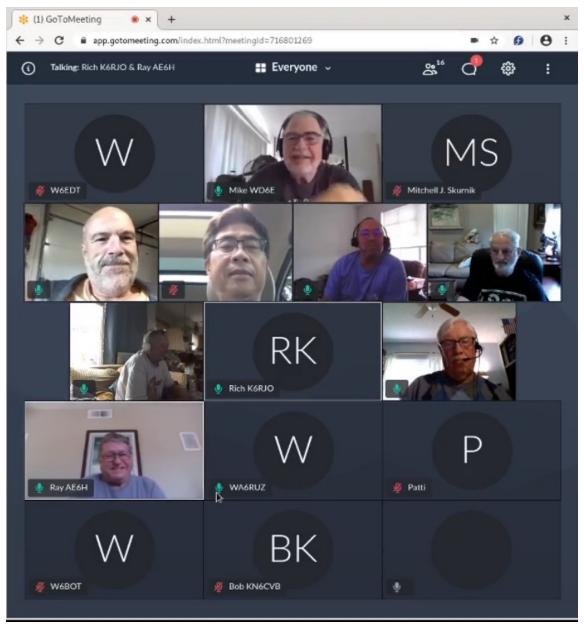
Erik, W6INE

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 SoaraMeeting_subject to change - check email or soara.org). When you follow the link you will see a screen similar to this

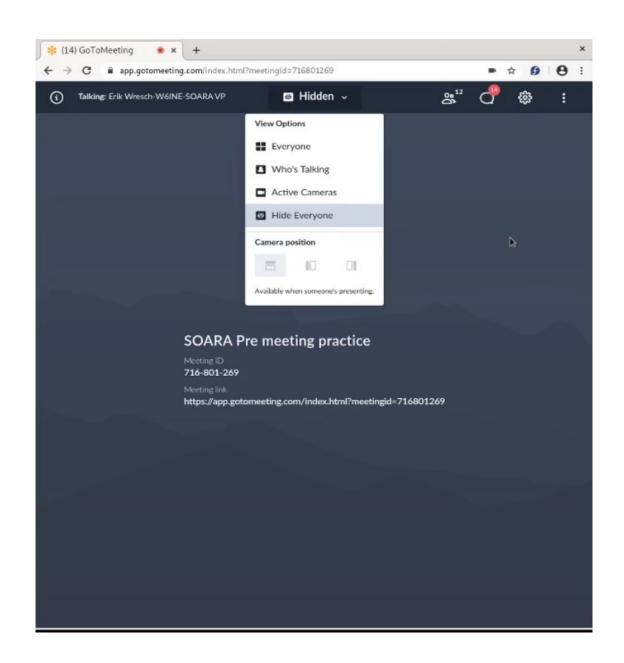
Be sure to choose "Join Meeting in Browser". Next you will have an opportunity to enter your name and ID. Please use your callsign for your ID. For example, I used <u>W6EDT</u> and my name was <u>Dale</u>. If you have previously used GotoMeeting, your name and ID will be stored in cookies associated 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.

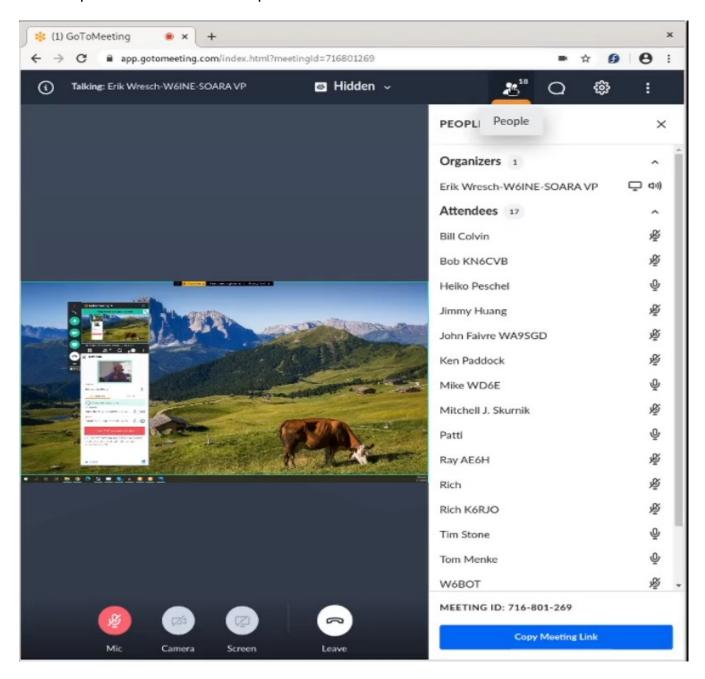


Once you enter the meeting you will see something like this (I am the "W" in the upper left:

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.



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.

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

2021 SOARA Calendar

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	18	15	15	19	17	21	19	16	20	19	15	-
Program	-	-	-	-	Spring Auction	Field Day Prep	-	SOARA Fair	-	-		-
FCC Ham Exam 6:00 PM			15	19	17	21	19	16	20	19	15	-
Education Classes 8:00 AM			13	17	15	19-	17-	14	18	16-	13	-
SOARA Elmer Saturday 9:00 AM	Net Every Sat	Net Every Sat	20	24	22	FD	24	21	25	23	20	-
SOARA T-Hunt 1:00 pm	<u>updates</u>	<u>updates</u>	<u>Updates</u>	<u>Updates</u>	<u>Updates</u>	<u>Updates</u>	<u>Updates</u>	<u>Updates</u>	<u>Updates</u>	<u>Updates</u>	<u>Updates</u>	updates
Board Meeting	25	22	22	26	24	FD-	26	23	27	25	22	-
Special Events	Quartz- fest 17-23	Palm Springs Yuma		<u>Visalia</u> <u>DX</u>	Dayton Ham- vention	ARRL Field Day 25-27	HRO Ham Jam	SOARA Picnic		<u>JOTA</u> 16-18		SOARA Holiday Party
Major HF Contests		ARRL DX-CW 20-21	ARRL DX-SSB 6-7 CQWPX SSB 27-28		CQWPX CW 29-30	ARRL Field Day 25-27			CQWW RTTY	CQWW SSB	CQWW SSB	
Volunteer Events	OC Chili Run	Paws Fur Pink OC Chili Run	D	Dessert Storm Rally Ride for Rwanda	HD Trails OC Mara- thon LH Mara- thon	ARRL Field Day 25-27	MV Fire- works 4				Vision Quest	

Dates subject to Change - Check the SOARA Web Site (http://www.soara.org) to verify locations and times or click on the live links in the table

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.



<u>License Exams:</u> 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.

<u>SOARA Library:</u> 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	— 1	47.645	-	(110.9)		Laguna Beach
	2m	_ :	L46.025	+	(110.9)		San Clemente
			L45.240				Trabuco
D-STAR	2m	— 1	.46.115	+	(K6SOA	C)	Laguna Beach
	220	_ 2	224.100	-	(110.9)		Laguna Beach
	220	_ 2	224.640	-	(pvt)		Santiago Peak. (C)
			145.660				Laguna Beach
D-STAR					(K6SOA	B)	Laguna Beach
			147.180				Santiago Peak. (C)
D-STAR	1.2G	12	282.600	-	(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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wa6ed@soara.org

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