



The

January 2020

# Propagator

The Monthly Newsletter of the South Orange County Amateur Radio Association

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## General Meeting

January 27,  
2020 7:00 PM

NP Murray  
Center  
Veterans Way  
Mission Viejo

## President's Message, January 2020

### The Benefits of Contests

While many hams are active, and even avid contesters, others are not, and participate only infrequently or not at all. Some even bemoan contests that dominate a band or bands as nuisances and inconveniences that interfere with their other radio activities. While I'm mainly in the infrequent participant group, I submit that contests, especially for new or newly upgraded hams, are a great way to enhance your operating skills. I encourage new hams to jump in and participate in contests to help them learn more about your own particular setup, propagation, band conditions, and ham communications in general. It's also a way to get bragging rights for having to contact other stations in exotic and distant places. Jumping into a contest should only be done with a few caveats in mind, however. Here are a few, and I'm sure experienced Elmers can think of a few more.

First, when you turn on your radio and tune up to an active band, and you hear what is unmistakably a contest going on, follow the 3 prime directives of ham radio; Listen, Listen, and Listen. You will often get clues as to which contest it is, and importantly, what the exchange is. When you determine what the contest most likely is, you can either google the name of the contest i.e., "Minnesota QSO Party", or "Mother Road", or the like. Then Google that contest name, or check the ARRL Contest Calendar to learn a little about the specific rules. Is there a maximum power level requirement, or a special geographical area you need to contact, etc? Also the contest rules will typically give you the exchange format, as well as any QSL or log submission info. Other contesting operators don't want or have the time to explain those things to you, so do a little research.

The exchange is very important, and is the very brief, even terse, formatted passing of info, such as your call, received signal strength, possibly ARRL section, location by City, County, State, grid square, or other specified info. Contests are fast paced, and the operator on the other end won't stop to chat. He/she only wants the exchange info in

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the exact format, will bid you 73 and move quickly to the next contact: "QRZ?" Also if the QSL or logging requirement are minimal, such as no submission of logs etc. required, then once you have learned the rules and exchange protocol, jumping in just to give the other party contest points for your contact is acceptable and fun. If log submission to the contest sponsor or manager is required, jumping in without logging will only be wasting the other party's time, because they can't use your points, and won't be appreciated. You can always choose to submit your log, of course.

As mentioned before, contests are great way to check your equipment, antenna effectiveness, and get some operating experience. Who knows, you may, with a bit of practice, turn into an avid contester yourself. If you don't like or wish to contest, then stick to the repeaters on vhf and uhf as those contests are invariably on simplex frequencies, and for HF you can always go to the 17 meter band, where by gentlemen's agreement, no contests are held. Otherwise, I encourage you to check them out. Then you'll hear, "73, good luck in the contest!, QRZed?"

**Ray, AE6H**

### **[General Meeting - January 27, 2020](#)**

**Norman P. Murray Center, 24932 Veterans Way, Mission Viejo**



Please join us for our January, 2020 meeting at the Murray Center to hear our local DXpeditioner from Orange county, Arnie, N6HC present the story of the Ducie Island Dxpediton which won the Dxpediton of the year award in 2019. This rare DXCC entity had not been activated for ten years prior to the VP6D team traveling thousands of miles by airplane and ship to visit this uninhabited South Pacific atoll. The travelogue is captivating and the amateur radio story intriguing. This was not a five star adventure and will remind us that DXpeditioning is not for sissies! But it should be a five star entertaining program. Don't miss it!!

**Erik Wresch W6INE**  
**Vice President/SOARA**

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## **SOARA Elmer Saturday (SES) February 8** **Soldering & Kit Building**

The next SOARA Elmer Saturday will be Feb 8, 9am-noon at the Murray Center in Mission Viejo, CA, Earth. Coffee and donuts will be provided.

We will be kit building. So bring a kit and get started! If you have a kit completed and you want to share your experiences, please do so. If you want to Elmer kit building, please bring your soldering and safety equipment. Could someone demo soldering coax connectors? Coax connectors would be interesting and useful. I plan to bring a solder station and a solder gun. Please bring eye protection and cardboard to protect the tables from the molten solder.

### **January 2020 SES APRS, presented by NJ6N**

The last SES was on APRS. Brian NJ6N demoed lots of cool equipment and explained lots of details we never fully understood. About 32 folks attended and we took the full two hours talking. Wow, we had a tremendous turnout. This was the largest SES I have ever seen! Great fun and thank you Brian!



I really appreciate the coffee and donut fund donations. This helps SOARA defer the cost and then SOARA can spend funds on more important things like radios, and equipment. Also, coffee and donut donations are more fair since those that benefit (drink the coffee and eat the donuts) support the cost. A great all around win-win!

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More APRS stuff

**73,**  
**Ed Barnes, WA6ED**  
[wa6ed@soara.org](mailto:wa6ed@soara.org)

### **[Repeater Director's Update](#)**

We've all heard those transmissions over our repeaters of background conversations where someone's transmitter has obviously been accidentally keyed. Handie-talkies and mobile radio microphones sometimes slip away from us and become lodged between various objects that press on the PTT button perfectly! To prevent extended unintentional transmissions, make sure you set your transceiver's "Timeout Timer". This timer will deactivate the transmitter after a specified amount of time. This may prevent others from hearing what might be potentially embarrassing conversation not intended for transmission, and your radio from damage from extended transmissions. Setting the Timeout Timer (TOT) to 3 minutes (180 seconds) is a reasonable amount of time that should not interfere with your normal QSOs

**Brian NJ6N**

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## Membership Report

Currently we are 227 active members with 40 unpaid dues. If you wish to continue your membership please pay your dues very soon. Regular dues are \$50. However, we do prorate on the second year and some may have a balance. This is why you may owe something less than \$50. Some members simply pay \$50 for several years in a row, forget, and then wonder why their dues are less. It's because they never really looked at their reminder email to take advantage of their balance. We will be converting all unpaid members to inactive soon. So, please pay your dues promptly to avoid becoming inactive. Also membership dues are a good way to help SOARA spread amateur radio fun and keep everything running.

If you need a new badge, let me know. I typically make badges monthly. If I forgot your badge, please remind me. If you forgot your badge, see me and pick it up. I have a stack of badges. Wearing your badge is a great way for others to get to know your callsign and name plus show your SOARA support!

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

## Walking T Hunts

First, Erik W6INE has been doing a fantastic job promoting T hunting. However, participation has been low. I'm guilty too. I just don't like driving around and wasting gas. Also, for safety reasons, I like to have a partner in the car to help as we hunt. This allows the driver to focus on driving. Walking T hunts don't use as much gas and don't need a partner in the car.

So, how many members are interested and will participate in walking T hunts? We had a fantastic turnout when Joe Moell K0OV ran a T hunt last April at the Murray center. One idea is SOARA could buy about 3 small T's similar to what Joe used for about \$600. If we could increase participation, I think it would be worth the expenditure. Also, we would vary location. I think walking T hunts would be more fun and a better learning experience for those new to T hunting. I sure know I need the practice.

Please send any feedback positive or negative to [board@soara.org](mailto:board@soara.org). I plan to compile responses and discuss this topic at the next SOARA board meeting.

We do need to help Erik by participating! T hunting is fun! If you never did it you are missing out.

**73,  
Ed, WA6ED  
Occasional T hunt hunter**

## **[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**

### **[Interesting Quote](#)**

This is a classic quote by Albert Einstein about radio. I think you will like it.

*"You see, wire telegraph is a kind of very, very long cat. You pull his tail in New York and his head is meowing in Los Angeles. Do you understand this? And radio operates exactly the same way: you send signals here, they receive them there. The only difference is that there is no cat."*

**Heiko, AD6OI**

### **[Solar Cycle 25 Begins](#)**

It seems like we may be seeing the beginning of a new cycle as described at [spaceweatherarchive.com](http://spaceweatherarchive.com).

**Mike K6MSM**



## THE SPECTRUM MONITOR®

Amateur, Shortwave, AM/FM/TV, WiFi, Scanning, Satellites, Vintage Radio and More

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## MILCOM

By Larry Van Horn N5FPW

MilcomMP@gmail.com

### A Military Radio Network Full of Secret Messages

"Spy King, Spy King, Do not answer."

Listen to the High Frequency Global Communications System (HF/GCS) or "Global" radio network (see *Milcom* December 2019) long enough and you will hear a voice message that starts out just like the one above. But it is only one of several message formats that you will hear on this Department of Defense/Joint Chiefs of Staff radio system.

These voice messages are broadcasts of coded messages injected into the HF/GCS network by the Department of Defense. Over the years in *Monitoring Times* and on my *Milcom* blog, I have written extensively on two of these encoded messages sent via this system.

If you dig deep enough on the Internet, you can at least get a basic understanding what these messages are used for, even though you will not know what any specific messages says.

Unfortunately, also on the Internet, we have seen many websites and blogs have that have posted material on these messages and most of what is we have seen published is not totally accurate. The information we present in this column and the detailed observations on our very popular *Milcom* blog page - "What is an EAM?" at <http://mt-milcom.blogspot.com/p/what-is-emergency-action-message-or-eam.html> is based on official sources and years of extensive monitoring.

**What is an EAM**  
The most common message broadcast on the HF/GCS is the JCS Emergency Action Message or EAM. The JC3S 5721.01E instruction, dated August 13, 2010, identifies EAMs as highly structured, authenticated messages primarily used in the C2 of nuclear forces. EAMs are disseminated over numerous survivable and non-survivable communication systems, including terrestrial and space systems.

In the U.S. military's strategic nuclear weapon command and control system, an Emergency Action Message (EAM) is a preformatted message that directs nuclear-capable forces to execute specific Major Attack Options (MAOs) or Limited Attack Options (LAOs) in a nuclear war. Individual countries or specific regions may be included or withheld



Navy E-4B aircraft commonly broadcast EAMs on the HF/GCS. (US Navy photo)

in the EAM, as specified in the Single Integrated Operational Plan (SIOP).

EAMs utilize cryptographic protocols (including such methods as digital signatures) to authenticate the messages, thereby ensuring that they cannot be forged or altered.

In the United States, the EAM is issued from the National Military Command Center (NMCC) at the Pentagon or, if it has been destroyed by an enemy first strike, by the Alternate National Military Command Center - "Site R" at Raven Rock, or by the Boeing E-4B National Airborne Operations Center (NAOCC).

The Nuclear Command, Control, and Communications (NC3) Hybrid Solution (HS) is the principal means of dissemination of EAMs in a pre-attack environment. The NC3 HS comprises several existing systems including the Navy's *Navra*, the Air Force's Strategic Automated Command Control System, the Defense Improved Emergency Message Automatic Transmission System Replacement Command and Control Terminal, the DMS, and the Pentagon Telecommunications Center. The primary interface between the NC3 HS and DMS are the National Gateway Centers.

The NC3 HS Emergency Action Message (EAM) architecture supports fixed and mobile EAM injectors and re-

Like many hams, I started out as a short-wave listener, tuning the radio spectrum from one end to another with receivers, picking up far away shortwave broadcast stations, ships or radio hams, or local police, fire, and aircraft comms. For many years, there were printed magazines available to cover all these various radio bands, particularly *Monitoring Times*, which stopped publication as shortwave broadcasting declined and many police agencies starting encrypting their transmissions.

I recently became aware that an on-line replacement has been operating, with many of the *Monitoring Times* former contributors, as a monthly magazine for \$24 a year. The articles on the nearly 90 page January issue cover diverse topics of the spectrum from DC to daylight, including ham radio topics. With our fixation on transmitting in ham radio, we may not realize the sophistication of diverse receiving techniques used on other bands, and the quite interesting real-life functions diverse users of radio have developed.

The radio interest hobby is much bigger than just ham radio. I would suggest giving this on-line magazine a try for a year, for a broader view of the radio spectrum. Their web page is [www.thespectrummonitor.com](http://www.thespectrummonitor.com)

**Kriss Larson, KR6ISS**

# 2020 SOARA Calendar

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	27	25	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	25	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	-	22	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 August		JOTA		SOARA Holiday Party
Major HF Contests		ARRL DX-CW	ARRL DX-SSB CQWPX SSB		CQWPX CW	ARRL Field Day 21-23			CQWW RTTY	CQWW SSB	CQWW CW	
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](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



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