



The

August 2021

Propagator

The Monthly Newsletter of the South Orange County Amateur Radio Association

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General Meeting

August 16,
2021 7:00 PM
Norman P. Murray
Center
23492 Veterans
Way, Mission Viejo,
CA 92692

Presidents Message - August 2021

Your help is requested! As fall and cooler weather approaches, SOARA will be putting together a Site Maintenance schedule for our facility on Temple Hill in Laguna Beach. This site is home to the 147.645, 224.100, and 445.660 analog repeaters as well as our 2M, 440 mHz, and 1.2 GHz D-star digital repeaters.

SOARA constructed and maintains this, our only actual building, at the site about 30 years ago, and, while on leased land, we do the physical maintenance on this building. At our other 3 repeater sites, we're tenants in a building owned and maintained by others.

Brian, NJ6N, at one of his many recent visits to the site to make equipment improvements, also photographed some developing physical problems with our building exterior. Paint is peeling, some siding panels need re-nailing, the roof needs cleaning, and soffit cracks need caulking. We also have a clogged outdoor drain that is supposed to shuttle water away from the entrance door, but clearly isn't functional anymore.

Because of Covid considerations, we will be phasing this much needed work in small increments, thereby limiting the number of us on the site at any one time. Ordinarily, we put together a large work party for one or two week-end days annually, but we haven't been able to do that for a couple of years, so things have backed up.

If you have some basic home maintenance skills, and would enjoy visiting our main repeater site, getting a tour of the electronics required to make a repeater site work efficiently, all while enjoying fantastic 180 degree ocean views, please let me know what you can do, and preferred days of the week, or weekend, when you could be available. Entrance to the site requires some advanced coordination with our landlord, as access is restricted for security reasons, and they have to let us in the gates. SOARA provides the materials, and any special tools beyond a hammer and screwdriver, you provide the "sweat equity. skills and labor.

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

This won't be occurring right away, as we're waiting for the weather to cool a bit, and the current Covid spike to subside. Late fall is most likely. Again, please contact me: ae6h@soara.org to let us know if you can donate a little time to help!

Thanks and 73 de Ray, AE6H

[General Meeting - RF Exposure](#)

We will be meeting at the Murray Center located at 23492 Veterans Way, Mission Viejo, CA, 92692. The meeting will start at 7:00 p.m.

We will be welcoming K5UJU, Ric Tell as our online guest speaker from Madison, Alabama.

First licensed in 1959, Ric has served 20 years in US government service and 34 years in private consulting practice. He is a physicist specializing in electromagnetic fields, antennas, RF measurements and RF safety. He is Chair of the IEEE Committee on Man and Radiation, Chair of IEEE Subcommittee on RF safety programs, member of the ARRL RF Safety Committee, and a Life Fellow of the IEEE.

Ric's presentation is not a how-to set of instructions for guaranteeing FCC regulatory compliance for your station but is intended to offer some food for thought on why RF exposure rules exist and how those rules could impact your operations. It could be a jumping off point for further exploration of how your operations result in RF exposure in the vicinity of your antennas.

The online meeting link for those not attending in person at the Murray Center is below.
[RF Exposure with Ric Tell, K5UJU](#)

Masking is not required; but we do ask that you use your best judgment of whether or not you should.

Ham Radio Examinations will be administered at 6:00 PM, prior to the start of our general meeting. Cost is \$15/attempt. Pre-registration is not required and you don't need to be a SOARA member to take the test.

Erik Wresch

Vice President - South Orange Amateur Radio Association

[SOARA Elmer Saturday - August 21, 9AM](#)

We will have our next SOARA Saturday at Gilleran Park. Coffee and Donuts will be provided. The theme will be Emergency Communications & Power. Bring your go box, antennas, and emergency power. We will setup tables & chairs near the Connex.

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One of many interesting go boxes from a past SOARA Saturday. Charlie's setup is amazing to see! Hope he will be able to attend. Nudge, Nudge, Wink, Wink...

- Battery & Connector Boxes
- Generators
- Solar Panels
- Multimeters, measurements
- Portable antennas
- Go boxes, Radio box
- Antenna analyzers and more
- Other interesting items



Jim, KI6LOM grounding the generator to reduce significant noise. The noise was driving Ray AE6H crazy until we grounded the generator. It was an amazing demo with Jim's scrap wire and a screwdriver ground rod. Jim is good at improvising!

Share your ideas and maybe collect new ideas for your emergency prep.

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

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[SOARA Membership Report](#)

Currently, we are at 229 active members. There are two new membership applications in process. These applicants should be new members after the next SOARA board meeting.

I suggest members try to be as event active as possible. SOARA is ramping up more events. There are always the nets. I recommend reviewing the SOARA website. Do you know where the gordo 100 information is located? How about the repeater coverage maps? Do you ever look at the SOARA calendar? We try to list all the events on the calendar. Stuff like event name, location, & date. You already missed National Night Out in Lake Forest this year. WE had a fun police dog demo and the helicopter, free hotdogs and pizza. The SOARA tent was right between the DEA and Vector control.

Let me know if your badge is getting old and faded. I need to make more badges soon. I don't mail badges. You have to come to events and pick up the badge from me thus saving postage. The clip doesn't mail very well anyway.

Should we get lanyards instead of clips? Let me know what you think.

**73,
Ed, WA6ED**

[San Clemente Repeater Upgrades](#)



At the SOARA San Clemente repeater site, the ACC RC-850 repeater controller has been replaced with an Audio Test Solutions (Formerly Link Communications) RLC-4 controller. By standardizing on RLC controllers, we have simplified our ongoing maintenance. The common platform will also allow us to standardize repeater commands for our users.

The EchoIRLP Echolink/IRLP node computer has been replaced with a Debian Linux system running the svxLink repeater linking application. This supports both Echolink clients and direct linking between our repeater sites using svxreflector talk groups.

The repeater can be found on Echolink under the callsign K6SOA-R

Brian, NJ6N

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Temple Hill Repeater Upgrades



SOARA has acquired new repeater radios and a new 6-port RLC-Club Deluxe II repeater controller for the Temple Hill site. Last Friday, August 6th, they were installed.

The new Bridgecom CS-540 440 and BCR-220 220 repeater radios are installed and connected to the new RLC-Club Deluxe II 6-port repeater controller. The 2Meter machine, Santiago link radio and svxLink/Echolink computer remain on the old RLC-3 controller.

The plan is to move these last three components over to the new RLC-Club controller once the final controller configuration and testing is completed. The 220 repeater is currently functioning on its own internal controller. This was unintentional and will be corrected during the next visit.

Brian, NJ6N

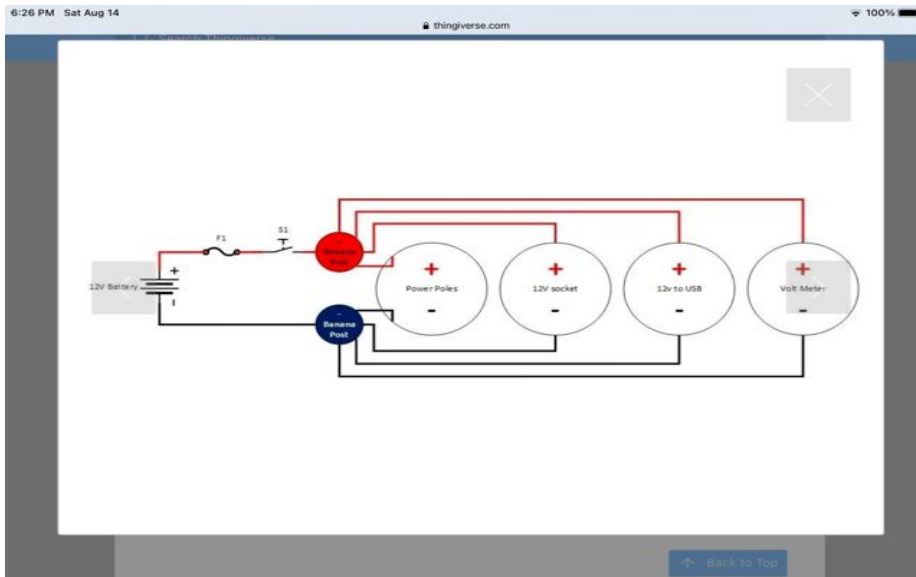
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[The Connector Box Project](#)

I designed the connector box because I wanted to stack battery boxes and keep everything clean in the garage. The basic idea is to put all the expensive connectors in a separate box that could be reused with different batteries during an emergency. I also wanted versatility. Maybe different connector boxes for different applications?

This is the basic schematic from my article on Thingiverse. I posted all the connector box STL files on Thingiverse so anyone could print their own parts.

<https://www.thingiverse.com/thing:3688007>



Here's the stacking example. I keep everything I need inside the several ammo boxes. I like to use the light weight plastic boxes from Harbor Freight. Only buy when on sale!

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This example illustrates several different configurations of connector boxes. I found the four port design seems to work well. I like having a volt meter. The power switch is not really needed, just unplug the pig-tail connector to turn it off. Options are USB adapters, 12v socket, and powerpoles. There is a combo USB 5V and voltmeter on Amazon somewhere.



This photo shows the wiring. I like having the fuse in the pig-tail cable. Eliminating the power switch and the external fuse simplifies the wiring. Solder quickly as not to melt plastic. Wiring is more complex if you want an internal fuse and switch. I use Romex wire with the insulation stripped off. Don't nick the wire when stripping off the insulation. If you nick the copper wire, it can easily break in two when bending the wire.

You may notice I 3D printed the Anderson powerpole panel mounts. You can buy PanelPoles for \$20 each at HRO or you can make your own with a 3D printer! The only downside is no rubber cover over the powerpoles. Oh yeah, I keep everything protected inside the ammo box. I don't need the protective cover! I found the panel mount STL files

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and printed them off Thingiverse. <https://www.thingiverse.com/thing:3726066> I'm not sure if this link is the same I use. I suggest looking around on Thingiverse. I usually print 100% PETG.

Hopefully, this will give you some battery box ideas!

**73,
Ed, WA6ED**

SOARA Statement of Income and Expenses - July 2021

Ten Months Ended July 31, 2021

Income:

| | |
|-------------|--------|
| Memberships | 10,909 |
| Other | 1,073 |

| | |
|---------------------|--------|
| <u>Total Income</u> | 11,982 |
|---------------------|--------|

Expenses:

Repeaters:

| | |
|-----------------|-------|
| Site rental | 3,620 |
| Utilities | 1,411 |
| Equipment | 1,384 |
| Total Repeaters | 6,415 |
| Website hosting | 125 |
| Insurance | 820 |
| P.O. Box | 130 |
| Antennas- Fong | 179 |
| Meetings | 237 |
| Miscellaneous | 193 |

| | |
|-----------------------|-------|
| <u>Total Expenses</u> | 8,099 |
|-----------------------|-------|

| | |
|-------------------|-------|
| <u>Net Income</u> | 3,883 |
|-------------------|-------|

Cash Balances:

| | |
|-----------------|--------|
| General Account | 24,544 |
| Raffle Account | 2,061 |
| PayPal Account | - |

| | |
|-------------------|-----------|
| <u>Total Cash</u> | 26,605.45 |
|-------------------|-----------|

**Ron Mosher - KOPGE
SOARA Treasurer**

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SOARA Library/Nets

As some of you have already heard the AD6OI/SOARA Library is now up and running at our house. (Please see attached picture for details). This library contains ARRL Handbooks, Repeater location guides, Tech modification books, radio and electrical books and a wealth of radio related information. For now the library will be open from 1pm to 4pm on Saturdays, and other times by appointment, if you call first, either by radio or telephone. E-mail will also work but allow at least 24 hours for a reply.

In other news, when using SOARA repeaters there are some things that it might interest you to know.

It is always good to key down for several seconds when first waking up your favorite repeater, otherwise the beginning of your announcement won't be repeated.

Also if you are in an extended conversation please leave room for others to break with their call sign.

It is never good form to interrupt a conversation with a comment. Using your call sign to identify yourself is usually sufficient to get the attention of the individuals involved in a conversation (aka QSO). When recognized feel free to go ahead with your comment.

You can find a summary of all of our nets at [SOARA Net Schedule](#)

Thank you
Heiko AD6OI
Director of Communications for SOARA

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 "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/>

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

Brian, NJ6N

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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 | - | RF Exposure | - | - | - | - |
| FCC Ham Exam 6:00 PM | | | 15 | 19 | 17 | - | 19 | 16 | 20 | 19 | 15 | - |
| Education Classes 8:00 AM | | | 13 | 17 | 15 | - | 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 | updates | updates | Updates | Updates | Updates | Updates | Updates | Updates | Updates | Updates | Updates | updates |
| Board Meeting | 25 | 22 | 22 | 26 | 24 | FD- | 26 | 23 | 27 | 25 | 22 | - |
| Special Events | Quartz-fest 17-23 | Palm Springs Yuma | | Visalia DX | Dayton Ham-vention | ARRL Field Day 25-27 | HRO Ham Jam | | SOARA Picnic 18 | JOTA 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 | OC Chili Run Baker to Vegas | Dessert Storm Rally Ride for Rwanda | HD Trails LH Marathon | ARRL Field Day 25-27 | MV Fire-works 4 | | | | Vision Quest OC Marathon 7 | |

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

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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:

- 40 meter HF (7.200 MHz +/- , Sundays @ 8 AM
- 10 meter HF (Technicians Welcome) (28.415 +/-) Sundays @ 9 AM
- General Membership Net - UHF/VHF (447.180, 147.645 & 224.640): Tuesdays @ 8 PM
- Astronomy - VHF 147.645: Wednesdays @ 7 PM
- D-STAR (146.115 C module): Wednesdays @ 8 PM
- Dinner Net - 147.645, 224.640, 447.180: Fridays at 7 PM
- Tech Net - 147.645, 224.640, 447.180: Saturdays @ 9 AM

- California Rescue Communications (Gordo Net) HF (7.250 MHz +/- for QRM): Weekdays @ 8:30AM
- MVRACES - 447.180: Tuesdays @ 7PM
- Tri-Cities RACES - 146.025: Wednesdays @ 8 PM
- LNACS - 147.645: Thursdays @ 7 PM
- OC Parks Fire Watch - 447.180: Thursdays @ 8 PM

SOARA OFFICERS

President: Ray Hutchinson, AE6H 949-322-8468
ae6h@soara.org

V.P.: Erik Wresch, W6INE 714-883-7694
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Secretary: Vacant
@soara.org

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nj6n@soara.org

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Past President: Tom Hobbs, AE6SH 949-830-8131
ae6sh@soara.org

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k7kce@soara.org

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wa6ed@soara.org

Raffle: Bill Colvin KM6FOY km6foyl@soara.org

Testing: Steve Kuver K6UVR k6uvr@soara.org

Website: Vacant
@soara.org

Ambassador: Spencer Ammermon, NG6K
ng6k@soara.org

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