## General Meeting

June 15, 2020
7:00 PM
via
GoToMeeting

## President's Message, June 2020
## Field Day with Covid-19

As field day rapidly approaches, it becomes more obvious that ARRL Field Day 2020 won't look much like most of the Field Days SOARA has participated in in the past. As a reminder, the operating period for FD 2020 will be from 11:00 am, Saturday June 27 until 11:00am Sunday June 28. Most if us will be operating solo, or with a family member who is also a ham, from out back yards, a remote campsite, or some other location that will allow us to practice prudent social distancing. I certainly encourage that. For me, FD will be a portable set up from my back yard, attempting to take advantage of bonus points offered for emergency type set ups. That's not completely necessary, because you can also operate from your regular home station, with the comforts of home, if you choose. You just can't mix and match for optimum points.

We will have a presentation Monday night, on the Online SOARA meeting via the APP "Go to Meeting" that I think you'll find helpful for sorting out what you may want to do for field day. It will be in the form of a Power Point, explaining the rues, and a video about the logging software the SOARA has used for the last few years to help you understand it, You might find it helpful if you wish to download and play with it before the meeting. You can the software at N3FJP.org. Its not free, but it has a very nominal cost. Once you get it, updates are free.

The PP also explains for newbies, (or oldies such as me, who only have done FD as a 3A station with SOARA) what their options and classes are for 1&2 op stations, along with the advantages and disadvantages. This way our members now have time to decide which class they want to operate in, how the point multipliers work, bonus points, etc., available for their chosen class.

There seems to be a misconception circulating that somehow there are sweeping ARRL rules changes, There aren't! The single, 1 time only rule change, actually more like an addition, is that when 1 &2 op stations submit their individual scores, there will also be a place or way

for those stations to indicate if they are also members of a particular club.  As we understand it, the ARRL will publish the individual scores for the 1&2 op stations, just as they always have, but then somewhere, they will add up all the scores from entries that also indicated a club name, and they will publish an aggregate score for that club as well.  I haven't ordered the online info packet just yet, so maybe that will answer how to indicate your club.  I'll know before Monday night.

The links for our Go to Meeting meeting number, are on the SOARA.org website, front page, in the meeting announcement.  Also remember, its not necessary to download an app to run Go to Meeting, you can log in through your browser by following the easy instructions on the first page.  Hope you can log on and catch the meeting

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

## [General Meeting – June 15 via GotoMeeting](#)
## [Field Day with Covid-19](#)

Join us online via GoToMeeting for our June SOARA Meeting. The topic will be Field Day 2020 – COVID Style.   We will have a Power Point presentation going over the Field Day 2020 rules and the temporary changes due to COVID-19. There will be a presentation of the N3FJP logging software and how you can obtain it.  The rest will be a Q/A session. Experienced operators requested to attend for their expertise and newbies welcome to come and learn and ask questions.

Posted on the SOARA website is the link to join us online using GoToMeeting and a link to the ARRL web page where you will find the Field Day Rules. Strongly recommend reading the rules a few times to be familiar with them so you can be ready with your questions.

**Erik, W6INE**

## [Membership Report](#)

We are currently 217 active members.

One May member: AA6UG, Morris, welcome! One Silent Key: Jeff W6FCC, we will miss Jeff.

If know someone wants to join SOARA. The application signatures have been temporally waived. The process is: fill out the application, send it to membership@soara.org, pay your new member dues & initiation fee $90, when the board meets we will review your application. Once approved I 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 to maximize your value! Something as simple as participating in a net will get you going. Check out 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. 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 due to Covid. I'm missing the coffee & donuts! However, we have been able to get on the radio and have a directed tech net. Get on the air and ask a question or just say hello. This net is occurring every Saturday 9am until we can conduct normal SOARA Saturday meetings in person. Heiko typically runs net control and Ed logs the net online.

Soara Saturday Tech Net Log

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.

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


# SOARA Financial Report
# YTD Revenue and Expenses as of 04/30/2020

Revenue:

| | |
|---|---|
| Membership Dues | $10,925.00 |
| Initiation Fees | $440.00 |
| Total Membership Income | $11,365.00 |

Activities:

| | |
|---|---|
| Auction Commissions | $131.00 |
| Donations – Unrestricted | $723.00 |
| Donations - Restricted | |
| Donations - Hal's Estate | $680.00 |
| Asset Disposal | |
| Total Other Revenue | $1,534.00 |
| Total Revenue | $12,899.00 |

<u>Expenses:</u>

Site Rental:
| | |
|---|---|
| Santiago Peak | $2,450.00 |
| City of San Clemente | $0.00 |
| Laguna Beach Water Dist | $5.00 |

Utilities:
| | |
|---|---|
| Internet DSL | $413.48 |
| Telephone Lines | $518.39 |

Website:
| | |
|---|---|
| Linode | $99.55 |

Insurance
| | |
|---|---|
| Hartford | $633.00 |

| | |
|---|---|
| Post Office Box | $118.00 |
| Postage | $0.00 |

| | |
|---|---|
| Corporate Fees | $0.00 |

Activities:
| | |
|---|---|
| SOARA Saturday | $34.80 |
| Field Day – Food | $0.00 |
| Field Day - Other (Generator) | $0.00 |
| Picnic | $0.00 |

| | |
|---|---|
| Equipment and Repeater Maintenance | $2,185.77 |

Other/Miscellaneous
| | |
|---|---|
| Heiko - Radio Manual | $24.45 |
| Holiday Door Prizes | $337.02 |

| | |
|---|---|
| <u>Total Expenses</u> | $6,819.46 |

| | |
|---|---|
| <u>Net Revenue</u> | $6,079.54 |

| | |
|---|---|
| Raffle Income | $919.00 |
| Raffle Expense | $1,071.74 |

| | |
|---|---|
| Ending Cash Balance | $21,639.10 |
| PayPal Balance | $550.37 |
| Raffle Balance | $2,061.27 |

**Lori Carey**
**Treasurer**

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# 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

Have you experienced QRM in your favorite Amateur Radio Band and wondered where it was coming from?  With today's SDR transceivers featuring waterfall displays it is possible to characterize noise sources to an extent that may help to identify and locate their source.    It is also fun to see how much noise information you can determine from your modern transceiver. For example, this amateur operator observed strong interference spread across the 40-meter band appearing every 50 KHz.  A photo of the noise taken of my ICOM 7300 screen using the waterfall display and tuning marker FIX is shown in Figure 1.  The noise at various frequencies is contained in the red ellipses.
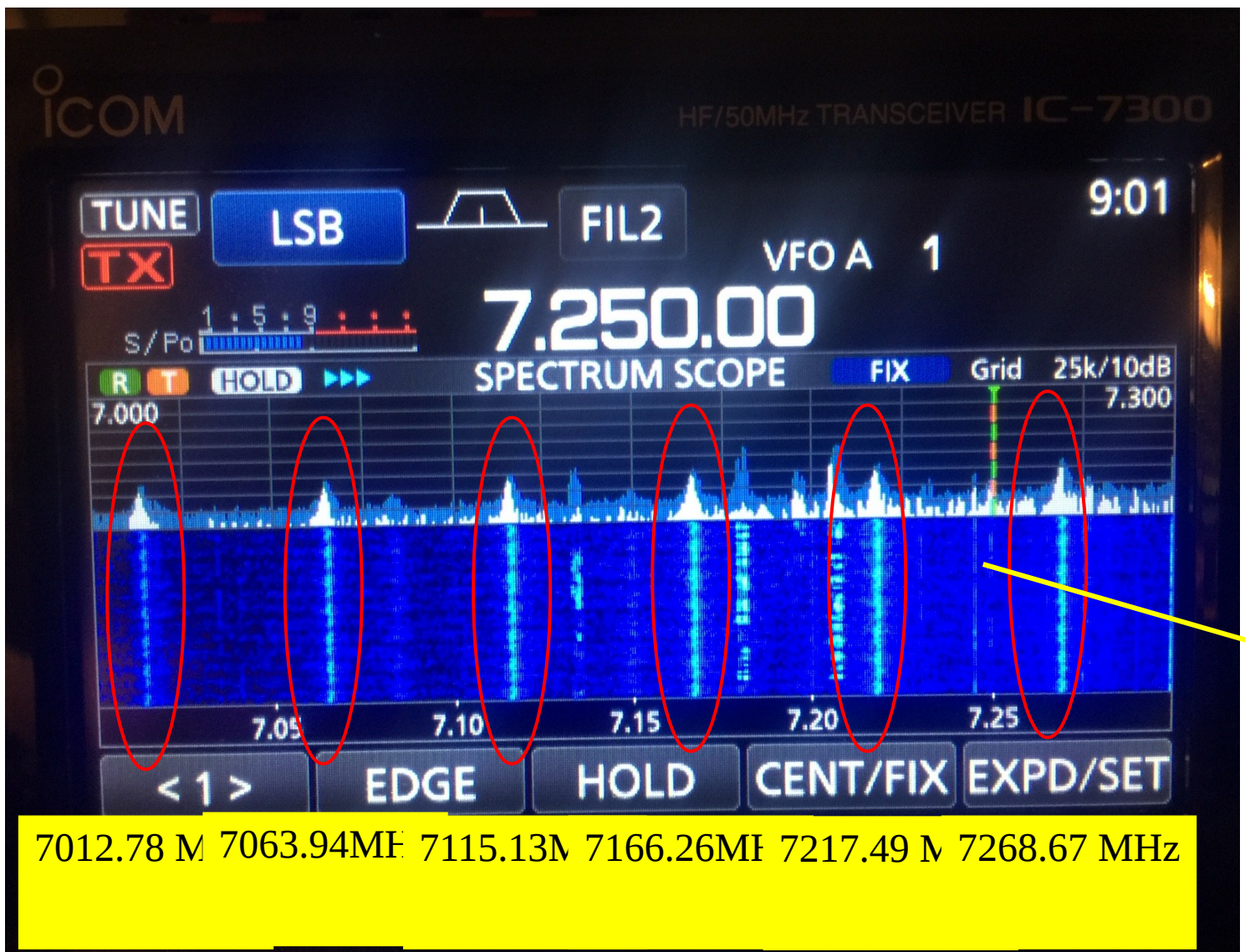


Figure 1. Picket Fence Noise Observed Across the Entire 40-meter Band (7.0 MHz to 7.3 MHz)

Also shown at the end of the yellow arrow is another noise located slightly below 7.25 MHz.

Changing the ICOM 7300 waterfall display to CENTER with a SPAN of -2 KHz to +2 KHz a single vertical noise line can be examined in more detail as shown in Figure 2. The noise had an approximate bandwidth of 1 KHz bandwidth and was observed to be slowly increasing in frequency with time. The spectrum moved up in frequency at a rate of around 100 Hz per minute. Thus, it would eventually sweep through 50 KHz in in about 500 minutes. This meant that like a broken clock sooner or later it would interfere with several nets that I routinely work on 40-meters.
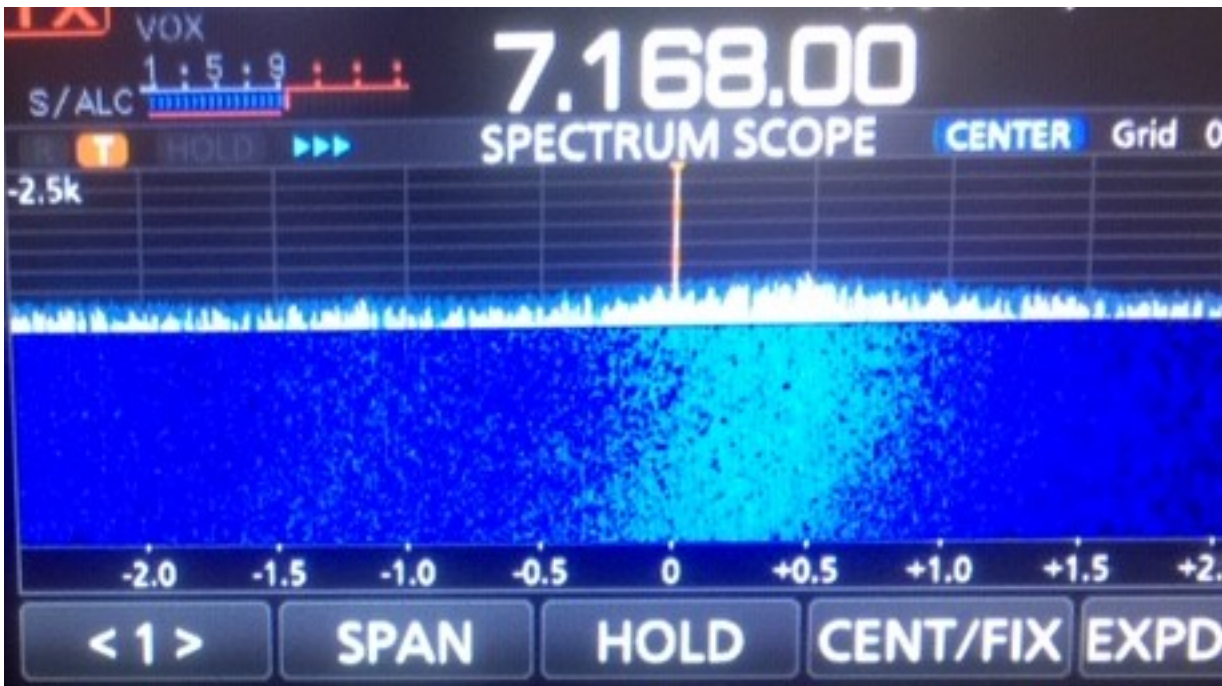


Figure 2. In this example, details of a single band of the Picket Fence noise can be determined quite easily.

The source of this noise was traced to the vicinity of two homes located about 100 yards from my QTH. Discussions with one of the homeowners didn't prove productive and the other home was occupied by a 91-year old lady with a care-giver and I felt she should not be bothered given the current COVID-19 Social Distancing practice we all should follow. My guess as to its source is that one of the homes had three electric bikes in the garage and the battery chargers might be the noise source or that the elderly lady had a medical machine operating that might be producing the noise. The noise has since disappeared.

A second even more curious noise appearing in the 40-meter band is shown in Figure 3. Again, I used the CENTER function to enlarge the noise spectrum first observed in the FIX function. The noise appears from time to time and appears to have frequency components like the Picket Fence noise described above but differs in that it does not repeat at 50 KHz intervals across the band. It is about 4 KHz wide and sounds like a motorboat. It does not move in frequency with time either.
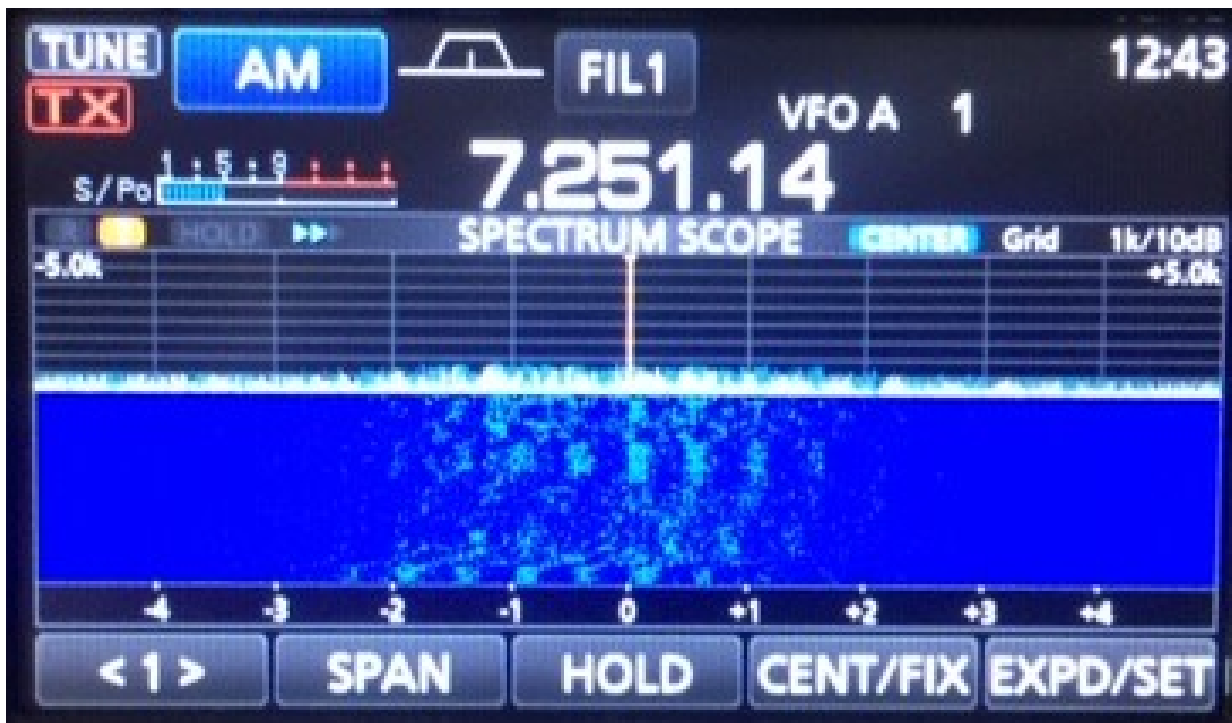
Figure 3.  Motorboat noise in the 40-meter band.

As I tuned my ICOM 7300 below the 40-meter band I found several CENTER function spectra resembling that in Figure 3.  As I continued to look at lower frequencies, I discovered the spectrum shown in Figure 4.
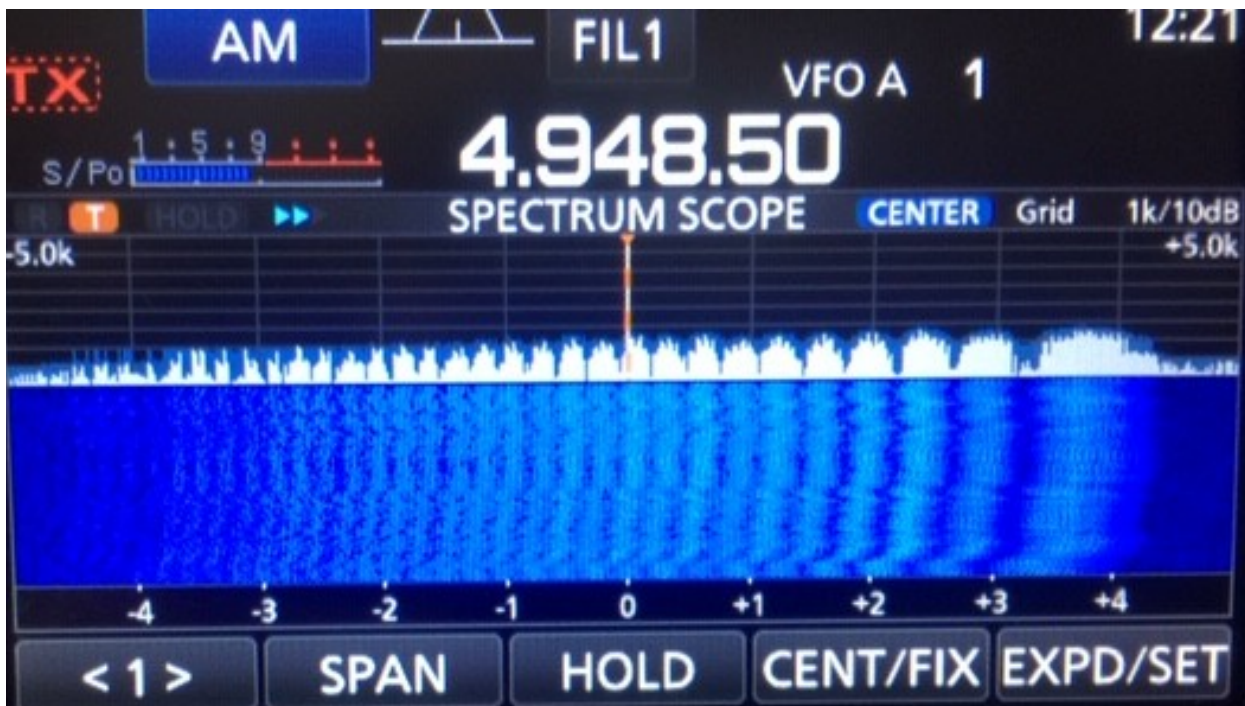


Figure 4.  Possible source of the Buzzing Noise in the 40-meter band.

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My guess is that this is the source of the noise in Figure 3 with reduced amplitude in the 40-meter band. It is a very unusual spectrum and has a mirror image at a lower frequency (like an AM signal without a carrier).  If anyone recognizes this spectrum, I would appreciate hearing from you.  With help from W6EDT I determined that it must be local since he lives a few miles from me and did not hear it at his location.

Again, without further effort in tracing its location, I have no idea what the source is. One could speculate that it is associated with DC to AC micro converters on a neighbor's solar power system.  This possibility is partially supported by the spectrum shown in Figure 5 provided by W6EDT that is characteristic of noise from roof top Solar Edge solar power systems in Orange County.  Noise from Solar Edge systems is also prevalent across the 10-meter band every 200 KHz according to a reliable source.  Perhaps the noise in Figure 5 is one of the 200 KHz harmonics of the signal shown in Figure 4.  It is also curious that the noise in Figure 3 is nearly 50 KHz below the Solar Edge noise in Figure 5.  If you have any thoughts about these noise problems, please don't hesitate to contact the writer at KC6FZY@SOARA.org.
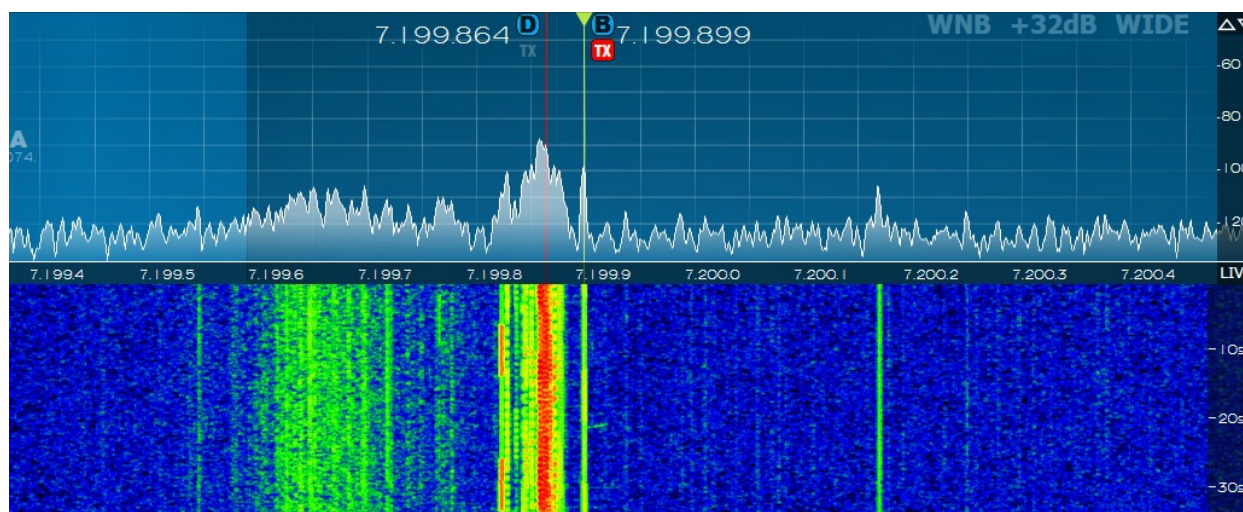


Figure 5.  Solar Edge Micro Converter noise spectrum in the 40-meter Band. Flex 6600.

In conclusion, the capabilities of my ICOM 7300 have opened the world of noise characterization with spectrum analysis including changes in the signal's parameters over time.  Perhaps, this capability can be incorporated in T-Hunt events where not only is location of the fox determined but its modulation characteristics identified.  Of immediate value is aiding an amateur radio operator to determine if a neighbor's solar power system is interfering with communication on his/her favorite operating band. Lastly, information such as that described in this paper can be submitted to a member of the ARRL's Volunteer Monitoring Program for study and eventually to the FCC for detailed investigation and enforcement of FCC Part 97 if necessary.

## Charlie KC6FZY

# 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 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 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,

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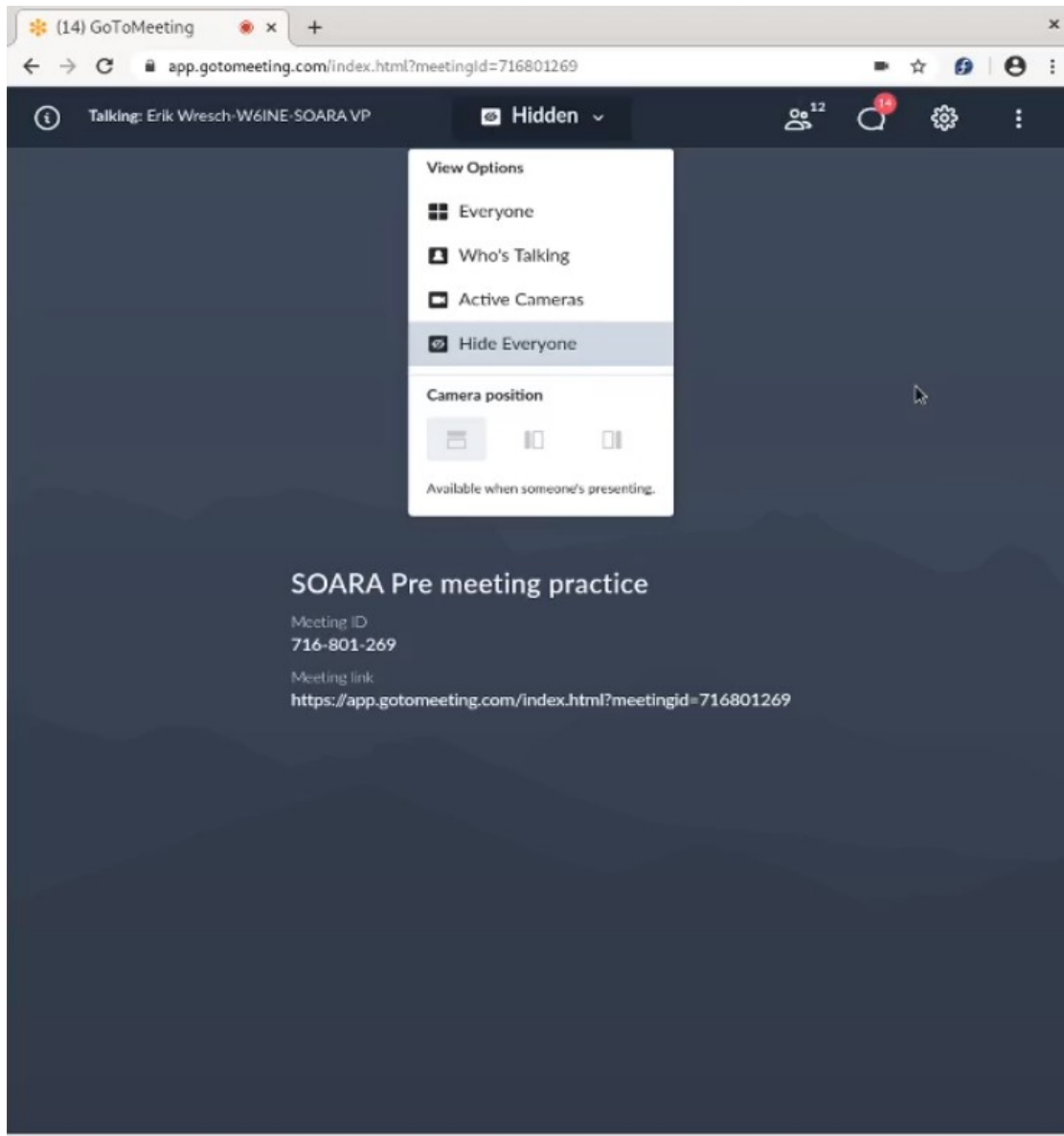
As was mentioned above, a headphone is best, but as long as you do not unmute your mike, the PC speakers will also work.

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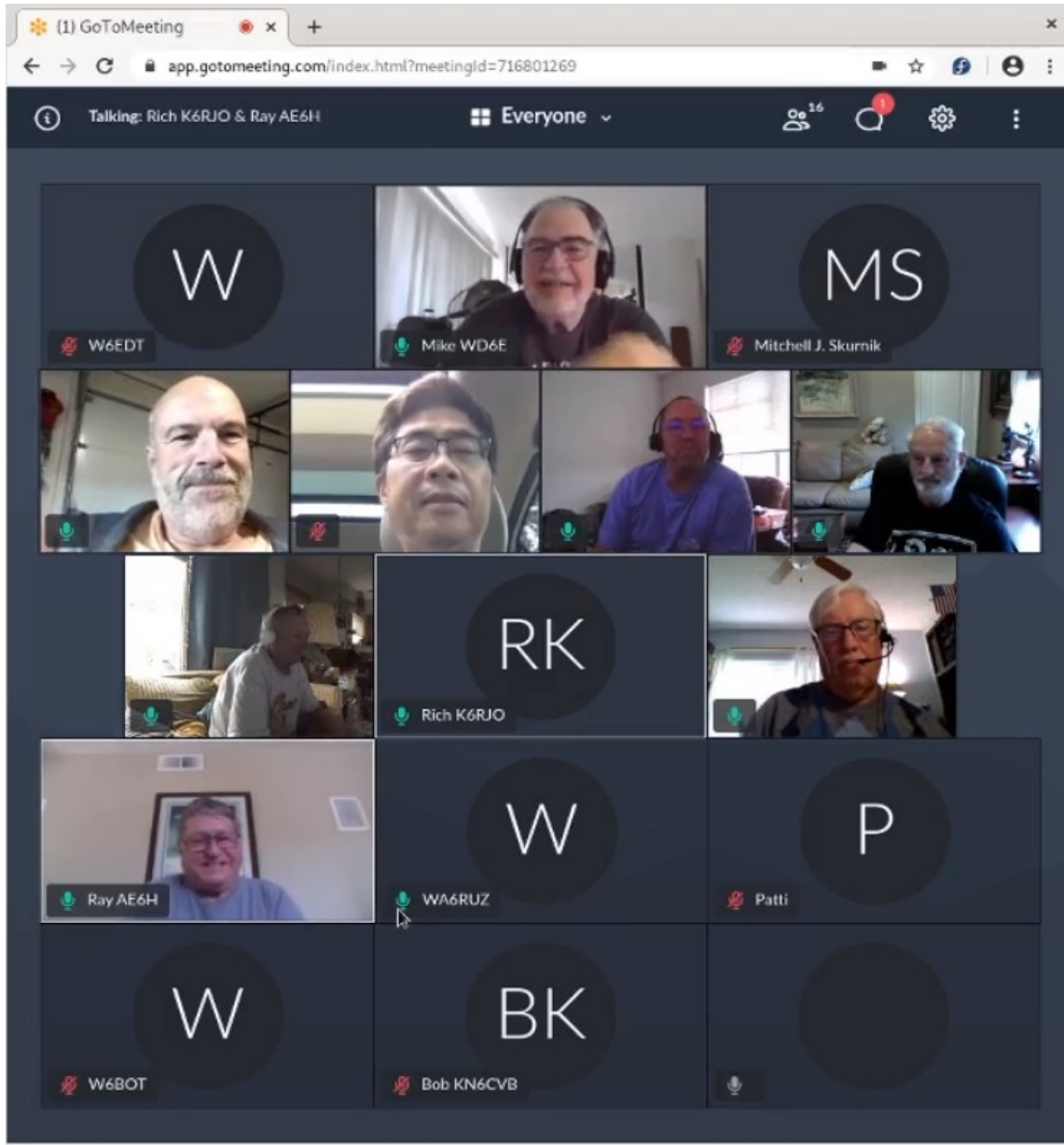


I would suggest you click on 'Everyone' at the top of the screen and change the display to 'Hide Everyone'. This will make the presentation, larger and easier to see.
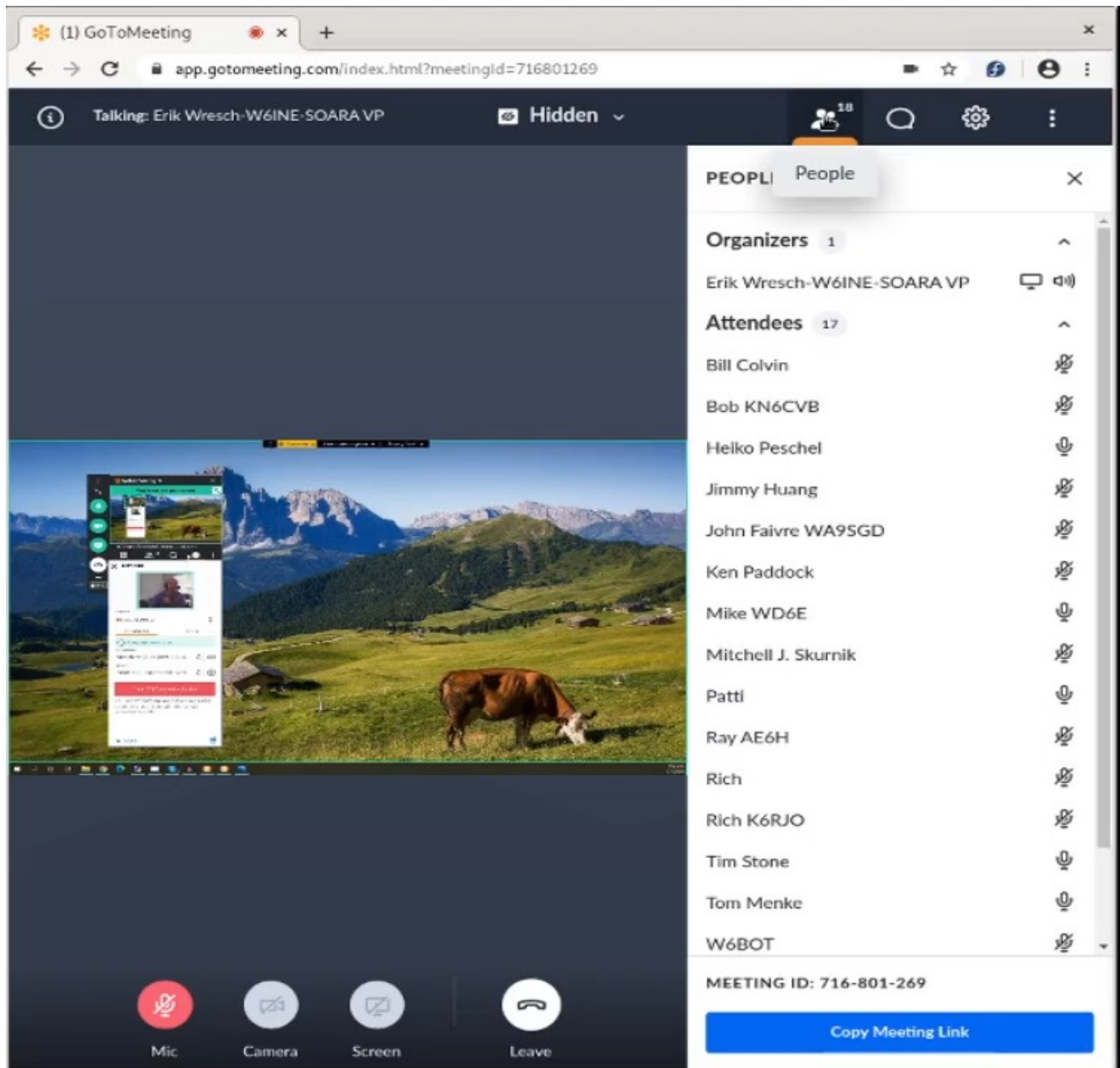
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Finally, if you need to update your name or simply want to see who is logged in, use the people icon at the top right of your screen. To update your name or ID, click on your name and press "Edit" in the drop down menu.



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**

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Send e-mail to membership@soara.org or leave a message at 949-667-0173
Facebook: K6SOA Twitter: @K6SOA

# 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 | Quartzfest 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

# 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.

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      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

V.P.: Erik Wresch, W6INE        714-883-7694
w6ine@soara.org

Secretary:  Dave Southworth        ks6rfi@soara.org

Treasurer: Lori Carey, NI6X        949-444-8190
ni6x@soara.org

## SOARA DIRECTORS

Repeater: Brian Roode, NJ6N        949-257-2749
nj6n@soara.org

Publications: Dale Tyler W6EDT        949-360-1717
w6edt@soara.org

Membership: Ed Barnes, WA6ED        949-468-7706
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Education: Steve Kuver, K6UVR        949-874-1972
k6uvr@soara.org

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

Communications: Heiko Peschel, AD6  949-859-3868
ad6oi@soara.org

## SOARA APPOINTMENTS

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

Activities Coordinator: Dana Wresch, KM6LZG
km6lzg@soara.org

S. Saturdays: Ed Barnes, WA6ED        949-468-7706
wa6ed@soara.org

Raffle:  Bill Colvin KM6FOY        km6foy@soara.org

Testing: Steve Kuver K6UVR        k6uvr@soara.org

Website: John Zimmer, KM6BEE
km6bee@soara.org

Ambassador: Spencer Ammermon, NG6K
ng6k@soara.org

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