



Propagator

The Monthly Newsletter of the South Orange County Amateur Radio Association

In This Issue

President's Message.....1

SOARA Membership Report.....3

Ham Radio for the Newbie.....3

SOARA Saturday January Report....5

Financial Report. .8

Hermes Lite V2....9

Calendars.....11

General Meeting

NPM Center
 Feb26, 2024
 6:30 PM
 Norman P. Murray
 Center
 23492 Veterans
 Way, Mission Viejo,
 CA 92692

President's Message

Winter Field Day 2024 Report,

ON an early Saturday morning, January 27, 2024, with minimal planning, a small, but hardy and dedicated band of SOARA members and guests braved the harsh elements of our typically severe Southern California weather to set up and operate on HF for 6 grueling consecutive hours, in the wilds of Mission Viejo, CA. while becoming cold, tired, hungry, etc. having survived and overcome multiple adversities.

OH, Alright, now, for reality; We showed up around 9:00 am, as we oft do for Elmer Saturdays and the like, except this time it was “to meet the objectives” of Winter Field Day. We braved the weather of temperatures in the low seventies, and leisurely set up our rigs, portable antennas and accessories, at Gilleran Park with plenty of time to spare before4 the appointed 11:00 operating hour.

The weather was mostly sunny, we enjoyed the park’s green grass, a permanent picnic shelter, with 4 tables, BBQ’s, water fountain, and the like. In true So. CA Ham fashion, we turned it into a party/picnic, with coffee and donuts, lunch of tube steaks on the grill, with potato salad and chips. Oh, the adversities of living in a Mediterranean climate! We did wonder (briefly) how our fellow hams were doing in the northern regions, but again, only briefly.

The stated WFD objectives are to learn, refine, and demonstrate our ability to operate multiple bands with temporary portable set-ups, antennas, alternative power, and that are quickly deployed. This is to simulate what we we may have to do in an area-wide emergency, with major infrastructure outages. The WFD Association, the sponsoring organization, places the emphasis on “Meeting the Objectives” and not so much on racking up “Points” by making as many contacts as possible. This emphasis is very different from the ARRL sponsored Field Day in June, which has morphed into an event where participants rabidly chase “points”.

WFD is, instead intended to be every much like the original ARRL Field Days of the 1930's and 40's except, of course, with much more modern, and better technology. The first official ARRL Field Day was held in 1933, by Hiram Percy Maxim, (AKA, Hi Maxim, or HPM) himself. Quite a feat when we consider what those pioneering hams had to overcome and adapt to, for working contacts in the outdoors.

This year, as SOARA's 3rd WFD effort, we had 30 SOARA members and 5 guests sign in, far more than in previous years, likely to having done more publicity. We operated from 11:00 am to 5:00 pm, or the WFD recommended minimum of 5 consecutive hours. We had 3 HF radios, worked SSB on 5 HF bands: 10, 15, 20 and 40 Meters, and made a whopping 46 contacts.

Big thanks to all who turned out, and helped out, even if only by providing encouragement and moral support. Special thanks to Steve UVR, Phil KDI, Alan KOR, who made the majority of the contacts, and Ray, NOV, George SNX, Bill FOY, and me, AE6H, who also made a few. Special thanks too, to Erik, PWG who lit the charcoal, and grabbed the tongs to cook up the hotdogs we enjoyed for lunch!! In the true spirit of WFD, all heating for coffee, and lunch was done with alternate fuels; charcoal, propane, and butane.

Perhaps next WFD we'll add bands (VHF and UHF, 6M or 80M), and modes such as, AM, FM, CW or Digital . Like June FD, FM Repeaters are not allowed, but simplex is. One of the stated WFD objectives is to operate on at least 6 bands, and multiple modes, but we only achieved 5 and 1. With a little better planning next year, we can easily meet the 6 band and multi-mode objective. We met all of the other major WFD "objectives": Outdoors, portable, rigs, temporary antennas, multi bands, no commercial power, and the minimum of 6 hr continuous operating.

Remember, the intent of WFD isn't to make a lot of contacts, but instead to learn, demonstrate and improve our abilities to operate, with minimal infrastructure. We proved we were able to do that and fulfill an often overlooked but very real need during and immediately after disasters: When normal longer distance communications (Internet, landline, Cell, etc.), are disrupted, lot's of people, both local, as well as those relatives and friends, either a few hundred miles away, or out of state, have a very real need to communicate their "Health and welfare" information to each other. Even if the City, County and State, EOC's are up and communicating, they won't have the time or capacity to meet this demand. We can, and will be able to fill this very real need. On Saturday, January 27, we successfully proved this!

Best 73 de Ray, AE6H

SOARA Membership Report

Welcome to new member Reg Webb, AJ6RY!

We're currently at 220 active members. Of those, 26 of you still have not paid your 2023-2024 dues. If you haven't paid yet, **please check the email notices I sent you to see how much you owe** (it's in the subject line as well as in the message). SOARA always appreciates contributions, but we'd prefer you didn't make over-payments of your dues. If you haven't received a dues notice, please check with me first (membership@soara.org) before submitting a payment.

If you need a new badge or a copy of the repeater manual, send me an email at membership@soara.org.

73, Greg, N6PM

SOARA Membership Director

Ham Radio for the Newbie

When I first got into ham radio about thirty years ago, I had my wife, some extended family and many friends at work who were all into amateur radio. At that time, one of the reasons ham radio appealed to me and my wife was the autopatch feature of repeaters which enabled us to communicate with each other. We were also involved with a desert running and cycling relay race which utilized amateur radio operators to support the event. This made it very easy for me to learn my radio and stay active. My friends and family were my "club". In those days, I was known as KE6SAZ. My wife was KE6SAY because she passed the exam before I did. She probably got a higher score than me as well.

We then had kids, got cell phones (no more need for autopatch), and allowed our licenses to expire. I knew that there were still practical reasons to have a ham radio and always wanted to "get back into it" but life and money kept me away.

I eventually did get a license again; now I'm KK6PWG. But some of the friends and extended family who were once my "club" either moved away or passed away. Also, the technology of amateur radio has advanced so much since then. Ham radio autopatch is no longer needed where there is good cell phone coverage (just about everywhere). Yet ham radio has advanced and can now work with and through cell phones! There are also now more digital communications and interfacing with satellites, and computers. Even though I was an "old" ham, I discovered that I was once again, very much a newbie.

The hobby of amateur radio is very exciting but can be very daunting to a newcomer, especially to someone who is not tech or electronics savvy such as myself. There are so many questions for the new ham. What radio should you buy? What type of license should you get? Once you get a license and a radio, what frequencies or repeaters should you use? You might have already purchased a dual band handheld and programmed some repeaters only to hear everyone talking about completely useless or irrelevant (to you) stuff. You might liken it to a new driver timidly trying to get on a

freeway with everyone else doing 90 plus. Or perhaps you hear absolutely nothing on the air. Is my radio broken? Did I program it incorrectly? Is there anyone out there? Have I been duped? Don't give up!

Before you can answer those questions, you need to first know why you want a ham radio and what you are planning to do with it. Purchasing a radio is much like purchasing a car or a computer. There are many different makes and models and they all serve different purposes.

Do you want to communicate with friends and family while camping and hiking? Ham is great for that but only if your friends and family are also licensed! Perhaps you only want it for emergency use while you are enjoying the great outdoors with no cell service.

Perhaps you are interested in packet or other digital or computer based communications. Perhaps you are interested in amateur TV (<https://www.arrl.org/atv-fast-scan-amateur-television>).

One could go on and on about the many applications of amateur radio, but I might save that for another time written by someone more knowledgeable about those things.

For now, I will address the newbie who feels overwhelmed and doesn't know where to begin.

After you've thought about what you think you want a ham radio for, keep an open mind that you might want it for other purposes as well.

Try before you buy and dive right in. Sound like a contradiction? Allow me to explain. You can best learn about ham radio before making an expensive purchase by diving into free events and training. However, if you've already made a purchase, you can, and should, still come to these events to learn more.

SOARA hosts Elmer Saturdays (<https://www.soara.org/activities/soara-saturdays/>) "SOARA Saturday was started to give newer members and guests a less formal meeting upon which they can meet up with experienced club members to learn new skills or be introduced to new things in Amateur Radio." These are free!

Come to a monthly meeting! SOARA meetings are free and are open to guests and visitors. There are usually snacks and coffee as well as a guest speaker. During the break you can meet other hams from the area and get to know them.

Listen to a NET. (<https://www.soara.org/activities/net-schedule/>). A NET is an on-air meeting and there is a slight formality to it much as there would be at any other meeting of a group. If you already have a radio and can program it to access repeaters, you can join a net. Some nets are also broadcast over the internet so you can still listen even without owning a ham radio. You don't need to be a member to listen in or even to check in as a guest. Simply listening to SOARA's net or any of a number of other groups' nets is helpful.

Attend a Field Day. Read more about what Field Day is here - <https://www.soara.org/activities/field-day/>. Before I attended my first Field Day, I had seen photos of other field day events. I saw older hams using huge antennas and monster-sized radios and I thought that those are far beyond what I would ever need or

want to do with ham. I was intimidated by what I thought Field Day was and therefore did not go. Until recently that is. I participated in the recent Winter Field Day event with SOARA as I simply wanted to get to know other hams better. I didn't think I would get much out of the event itself. Over-sized "portable" antennas and monster-sized radios just aren't my thing. I was looking at the hobby the wrong way. I had only seen tech nerds trying to talk to someone on the other side of the planet just for the sake of being able to say that they talked to someone on the other side of the planet. I come from a law enforcement and public service/public safety background. As do my brothers and late father-in-law. My wife, the aforementioned KE6SAY, was a fire and police dispatcher. In our world, radio was for emergency communications. I would teach trainees that a "radio is not a cell phone". The "push to talk" (PTT) button is not a "push to think" button. Get on the radio, say what needs to be said and then get off. Pretty simple.

But when I went to Field Day, I discovered that all the ham operators were very welcoming to me, even though I am only a "Technician" and had never touched a HF (High Frequency) radio before. Even though I was invited to use their radios to "make some contacts" I decided to just listen and learn for my first field day. I learned that field day exists to prepare for a much larger scale emergency event and not just for a lost hiker trying to get help on a 2 meter hand held. There might come a day when the local infrastructure is down and large groups of people might very well need to contact someone on the other side of the country. Or the planet. Field Day serves as training for that very purpose.

Ham radio can be as simple as a fun hobby or as important as an important public service in times of disasters and emergencies.

So, if you are new to ham radio and you are feeling overwhelmed, come to some free events, meet some people and start learning beyond what you get out of the licensing. But most of all, have fun!

Erik Mansoor, KK6PWG

SOARA Saturday January Report

SOARA Elmer Saturday January 20, 2024 report

1. Started with \$62
2. Coffee -\$23.69
3. Donuts -\$20 to Greg balance is a donation to the fund
4. Donations \$25.19 plus a bunch of pennies to count someday!
5. Balance \$43.5

I was jet lagged and bought coffee this time. Costs add up fast. At least we still have a balance greater than zero.

16 Attendees: Ed WA6ED, Bob N5KZV, Greg N6PM, Claude W6CAG, Bud WB6RDO, Bill KM6FOY, Ray AE6H, Jim KI6LOM, Randy KK6TCB, Steve K6UVR, Ravi KN6SIP, Allan KN6KOR, Ray K6NOV, Dale W6EDT, Brian NJ6N, Horst KD7JHR.

Ed WA6ED & Bob N5KZV soldering a ATU-100 tuner kit.



Completed tuner kit, 3D printing a case for Bob N5KZV next. LCD display scans, needs a slower shutter speed on the iphone.



Brian N6PM brought in some Quansheng UV-K6 radios to demo.

Link to youtube video: <https://www.youtube.com/watch?v=2k6OfjtI234>



Bud WB6RDO demoing CW



Dale W6EDT, & Ray AE6H debugging Ray's Chinese HF radio.



Steve, Bob, and Ed talking about kit building & soldering



I messed up and didn't take a picture of Ray's K6NOV demos. He demoed a SDR and Chirp programming. We had a very busy SOARA Elmer Saturday. Next SOARA Elmer Saturday March 2 at Gilleran Park.

Be sure to thank Bill KM6FOY & Greg N6PM for help with coffee condiments and buying donuts.

73,

Ed, WA6ED

SOARA Elmer Saturday Coordinator

SOARA - Statement of Cash Income & Expenses October 1, 2023 Through January 31, 2024

SOARA - Statement of Cash Income & Expenses October 1, 2023 Through January 31, 2024			
Four Months Ended:	January 31 <u>2024</u>	January 31 <u>2023</u>	Increase (Decrease)
Cash Income:			
Memberships	8,164	8,523	(359)
Other	<u>1,746</u>	<u>3,283</u>	<u>(1,537)</u>
Total Cash Income	<u>9,910</u>	<u>11,806</u>	<u>(1,896)</u>
Cash Expenses:			
Repeaters including site rental, utilities & insurance	2,393	1,923	470
Member Activities	3,224	2,364	860
Other expenses	<u>619</u>	<u>764</u>	<u>(145)</u>
Total Cash Expenses	<u>6,235</u>	<u>5,051</u>	<u>1,184</u>
Cash Net Income	3,675	6,755	(3,080)
Beginning Cash-October 1	<u>24,917</u>	<u>25,860</u>	<u>(943)</u>
Ending Cash - January 31	28,592	32,615	(4,023)
Note: If any member has questions about the financials, please contact the Treasurer or any Board member.			

Ron Mosher - K0PGE
SOARA Treasurer

Hermes Lite V2

As The Hermes Lite 2 (HL2) is a direct sampling, open source SDR that will receive and transmit on 160M-10M. This is a very small, but full featured QRP (6W) transceiver that uses a computer running software to operate the radio.

There is software that runs on Windows, Linux and Mac. This is the same software that is used to operate the Anan 7000 DLE MKII and other similar transceivers. The software is based on the High Performance Software Defined Radio (HPSDR) work started by TAPR and continued by many contributors.

One of the attractions for me is the entirely open source implementation. Everything, from the schematics and BOMs to the FPGA code to the PC software is open for anyone to inspect and modify. One does not have to modify anything if you like what is already available, but just the idea of not being dependent on a manufacturer to fix things that you want improved embodies the 'spirit of ham radio'. Kind of the ultimate modern homebrew rig.

As with any project of this type, not everything is easy. Steve (K6UVR) each bought a radio. Mine worked very well after careful assembly, but Steve's radio has problems on transmit. Unfortunately, some of these problems may have been caused the final assembly, which is the responsibility of the user. When you buy the radio, you get a PCB and can order a case, a filter board and an I/O board (for antenna switching), but you must assemble them yourself. However, because everything is available, repair is relatively straightforward. We are debugging the issues now.

The HL2 uses Ethernet to communicate to the PC, so one can run it remotely from anywhere you can connect to the Internet. Some of the PC software allows receiving up to 4 frequencies/bands at the same time, so spotting DX can be fun.

Here is a picture of the HL2:

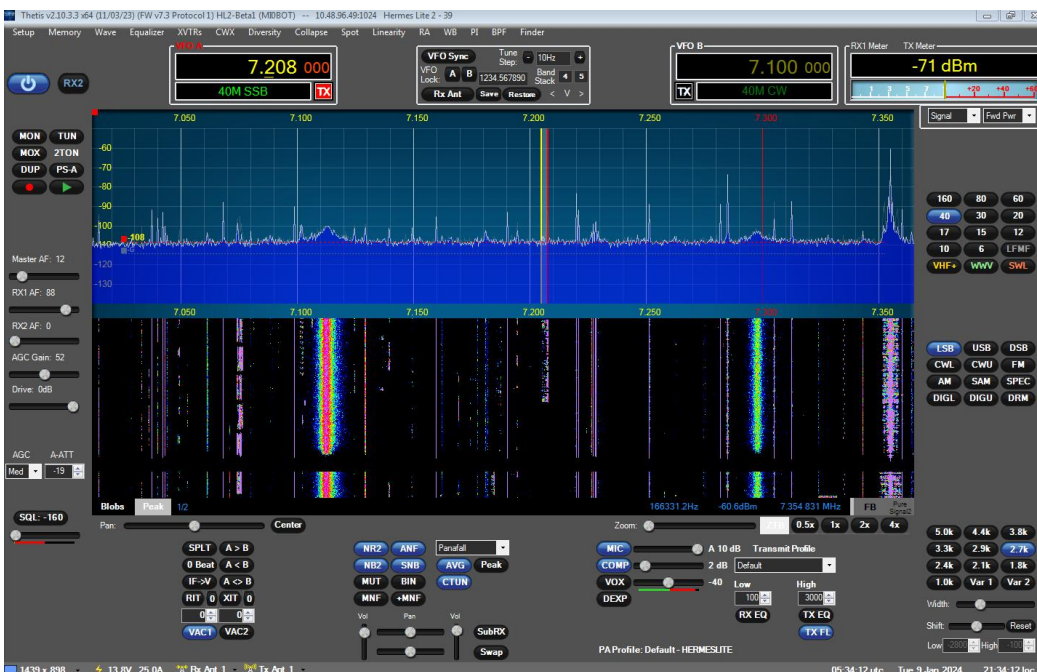


The front of the HL2, 11-15V DC power, Ethernet, external clock for sync or transverter, 10MHz reference In, CW Key/PTT



Pure Signal Input for adaptive pre-distortion, Second RX port for antenna diversity, RF1 (low power out for transverter), Main Antenna out (6W max) Also connection to Rpi Pico for antenna or programmable switching.

This is Thetis, one of the more sophisticated programs used to operate the HL2 under Windows. It can be customized with extra gauges, many different waterfall types. The noise reduction filters are very good and highly adaptable.



The cost for the HL2, filter board, I/O board and case is just over \$400. Not cheap, but a lot of capability and flexibility.

Dale Tyler

W6EDT

10

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

Calendars

Upcoming SOARA Events

Dates are subject to change. Check the SOARA Web Site (<http://www.soara.org>) to verify locations and times

This Month...

- February 26 6 PM - HAM Radio License Exams, Murray Center
- February 26 6:30 PM - General Meeting, Murray Center
- March 2 9 AM - Noon - SOARA Elmer Saturday, Gilleran Park
- March 4 7 PM - Board Meeting, Murray Center

Next Month...

- March 18 6 PM - HAM Radio License Exams, Murray Center
- March 18 7 PM - General Meeting, Murray Center
- March 23 9 AM - Noon - SOARA Elmer Saturday, Gilleran Park
- March 25 7 PM - Board Meeting, Murray Center

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
- D-STAR (146.115 C module): Wednesdays @ 8 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

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