

The March 2023

Propagator

The Monthly Newsletter of the South Orange County Amateur Radio Association

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Meeting

NPM Center

March 20, 2023

7:00 PM

Norman P. Murray

Center 23492 Veterans Way, Mission Viejo, CA 92692

President's Message - March 2023

Deb, KN6YRA and I just returned from a weekend in the California Desert, out near the Salton Sea. We were on an off-road adventure trip with our kinda new Bronco. This was only the second real DIRT the truck has seen.

While in the back country, we monitored 146.520 MHz, the national simplex calling channel and emergency channel, as per the ARRL Wilderness Protocol. More About that protocol later.

I was struck by the lack of understanding about the purpose of 146.520, and of good amateur practice in general, and FCC Part 19 identification rules. They still apply, simplex or not!

What were heard lots off trail and road chatter, like "turn right just up ahead" or "we're headed back to camp", "Is everybody on the road yet" etc, What we did not hear, not once, in 2 days of listening, and lots of transmissions, was a single call sign or any attempt to identify!

First of all, as I'm sure you know, simplex or not, we hams are required by FCC regulations to identify every 10 minutes, and at the end of a string of transmissions. Again, not once did we hear a single Ham Call. It sounded like a bunch of CB'ers. I'm a little doubtful that all the voices we were hearing were hams. I even heard one person giving another detailed instructions about how to operate their ____ (insert your favorite Chinese radio here) ____.

Friends, Im hear to tell you, that it is very bad amateur practice, to not identify, and to loan your hand held to non-hams, or to encourage non-hams to operate illegally! Second, 146.520 is not for trail nor other chitchat. We have approximately 12 or more recognized simplex frequencies for that. It's a Call and move off channel and, an emergency channel, especially for the Wilderness Protocol.

As for the Wilderness Protocol, (WP) all hams operating in the back country are encouraged to monitor 146.520, at the top of the hour, at least, if not more often. Also to listen for the LTZ DISTRESS SIGNAL. LTZ? It stands for Long Tone Zero. Repeatedly Pressing and holding the zero key on the radio keypad, white coding the PTT, for 2 -3 seconds, and repeating several times is the wilderness protocol distress signal.

From the Mt Diablo ARC Bulletin, who explains the Wilderness Protocol very well:

The Wilderness Protocol is now included in the ARRL ARES Emergency Resources Manual. Per the manual, the protocol is:

"The Wilderness protocol (see page 101, August 1995 QST) calls for hams in the wilderness to announce their presence on, and to monitor, the national calling frequencies for five minutes beginning at the top of the hour, every three hours from 7 AM to 7 PM while in the back country. A ham in a remote location may be able to relay emergency information through another wilderness ham who has better access to a repeater. National calling frequencies: 52.525, 146.52, 223.50, 446.00, 1294.50 MHz."

I doubt the "Hams" we heard anonymously using 146.520 have any idea about the WP, and would be best classified as 'LIDS", or very poor operators!

OK, I'm putting my soapbox away now.

73 de Ray, AE6H SOARA President

General Membership Meeting Monday, February 27 @ 7:00 pm. Norman P. Murray Center

Please join us at the Murray Center for our Membership Meeting.

It is March 2023; and an odd numbered year. That means it is time to take nominations for the Director positions of the SOARA Board to be voted on in April. These positions are a 2 year commitment of which some have committed to the positions longer than that. If unopposed, they may continue to do so. OR....if you are interested in running for one of these positions, you may do just that. If you're not sure about what a position's responsibilities entail; you can find it on the SOARA website. Though some positions rely on some technical abilities, none require a degree in Rocket Science. Please join us at the Murray Center on Monday. You may nominate yourself for a Director's position or nominate someone else; preferable with them knowing and agreeing to it.

Subject matter for presentation this night is still TBD. There will be a Door Prize for a Radio.

Erik Wresch - W6INE Vice President of the South Orange Amateur Radio Association

Note: Ham Radio Examinations will take place prior to the General Meeting and also at the Murray Center. Testing session starts at 6pm and is \$15/session. Pre-registration is not required and you don't need to be a SOARA member to take the test. Please contact our Education Director, Steve Kuver, if you have questions about testing at k6uvr@soara.org

SOARA Elmer Saturday, 03/18/23, Murray Center

I counted 21 attendees and 18 attendees that signed the log or I saw: NJ6N Brian, WA6ED Ed, KM6FOY Bill, W6WK Jaime, K6NOV Ray, W6FDT Dave, K6JKB Jim, KF6QPC John, N6PM Greg, KN6BMC Dave, KN6SIP Ravi, KK6TTL Jimmy, KN6OFF, George, W6TRG Tom, KK6UMB Tom, KD6JHR Horst, AD6OH Patti, AD6OI Heiko, K7KCE Joe.

Brian did a great job presenting details of APRS. We found Ray on the apris.fi map! Brian filled the room again! We had the same room as a few years ago when Brian presented the same topic. We were rotated 90 degrees and had a bigger screen. This was a much nicer layout of the room.

I don't know about others, but I learned several more details about APRS. Today was a very profitable meeting. I enjoyed looking at all the different equipment posted on Brian's website. Go to ni6n.com and click on the APRS icon. Lots of cool stuff.

Joe and Ed hid Thunt Foxes on different frequencies. Joe's worked. I had a bug in my code. I will continue testing and plan more Thunt foxes will be transmitting for the next meeting. I think my problem was the serial port glitched on the battery power and entered the configuration menu. All three of my transmitters had the same problem. No TX. I will put more guard code in for next time. Dale suggested a menu switch. I thought a menu switch was a good idea! Thank you Dale. I get to solder more. Woo Hoo! It will be an unused gpio switched to ground. I will select the internal pull-up. This should be simple and work great. I love deterministic solutions.

Bill KM6FOY bought coffee and helped setting up. I made coffee in the Brian donated air pot and bought the donuts. Heiko brought extra half & half.

Thank you Bill for the help. Lots to do on SOARA Elmer Saturday's. Today was no exception.

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Last month donations	\$65	
Today's donations.	\$55	
Starbucks Coffee.	-\$20	
2 dozen donuts.	-\$34	
		-
Balance.	\$66	

We payed \$54 for coffee and donuts and took in \$55 we are up \$1 from last month's balance with \$66.

73, Ed, WA6ED SOARA Elmer Saturday Coordinator

SOARA Membership Report

We're currently at 203 paid members. There are an additional 21 of you who haven't yet paid your 2022-23 dues. AT THE END OF THIS MONTH WE WILL DEACTIVATE ALL MEMBERSHIPS OF THOSE WHO HAVEN'T RENEWED! (If you're not sure whether you're renewed or now, feel free to contact me and I'll check for you.)

I'll have an updated version of the repeater manual available soon. Stay tuned. If you need a new badge, send me an email at membership@soara.org.

73, Greg, N6PM SOARA Membership Director

SOARA Statement of Income and Expenses October 1, 2022 - February 28, 2023

Five Months Ended:	February 28 2023	January 31 2022	Increase (Decrease)
Cash Income:			
Memberships	9,303	7,268	2,035
Other	3,283	1,479	1,804
Total Cash Income	12,586	8,747	3,839
Cash Expenses:			
Repeaters including site	<u>j</u>		
rental, utilities & insura	nce 2,498	3,325	(827)
Member Activities	2,415	2,174	241
Other expenses	786	991	(205)
Total Cash Expenses	5,699	6,490	(791)
Cash Net Income	6,887	2,257	4,630
Beginning Cash-October 1	L 25,860	27,741	(1,881)
Ending Cash - February 28	3 2,747	29,998	2,749

Note: If any member has questions about the financials, please contact the Treasurer or any board member.

Ron Mosher - KOPGE SOARA Treasurer

OpenWebRX+ on Atomic Pi

OpenWebRX is a software defined radio (SDR) web application that enables users to listen to analog and digital signals received



by an attached SDR device through their web browser. As the name implies, it is a receive only application. I had recently acquired a great single board computer to run this on. OpenWebRX can demodulate/decode FM, SSB, AM and many different digital signals straight away. Adding an AMBE device enables it to decode AMBE/IMBE based protocols used by D-STAR, DMR, Fusion, and NXDN. I purchased a DVMEGA DVstick 30 to do this.

I previously purchased several "AtomicPi" computers that are sold through Amazon by Digital Loggers A review of the board is available on HACKADAY

These single board computers feature an Intel® AtomTM x5-Z8350 Processor (2M Cache, up to 1.92 GHz) with 2GB DDR3L-1600 memory, HDMI, WiFi, 100MB Ethernet, and more. Complete specifications can be found here. The board requires a solid 5V 10watt power supply. Power is applied via a supplied breakout board or through a 26 pin DIP connector on the bottom of the board. I opted to solder wires directly to top of the 26 pin connector.



The AtomicPi comes pre-loaded with an older version of the Ubuntu Linux operating system. I wanted to use this computer to run OpenwebRX which requires the latest version of Debian 11 (Bullseye) or Ubuntu 22.04. Digital Loggers provides precompiled versions of various operating systems including Debian 10 (Buster) so I started with that. I copied the image to

an SD card using dd on Mac OS/X and booted the AtomicPi. First, I connected a serial console cable using minicom on my Mac to the UART JST connector so that I could see what was going on. It booted the SDCard, overriding the supplied OS on the internal 16GB eMMC flash storage without me having to configure the BIOS – great!

Once I was up and running with Debian 10, I had to set up the system including adding my user entry, adding to the "sudo" group for root access, and configuring networking through the serial console.

useradd -c "User Name" -m userid usermod -a -G sudo userid

Ethernet is configured through the following configuration file in /etc/network/interfaces.d/enp1s0

auto enp1s0 allow-hotplug enp1s0 iface enp1s0 inet dhcp

Restarting the networking service enables the ethernet interface

systemctl restart networking

To bring the O/S up to date, I ran the usual apt update && apt -y upgrade commands. I also installed dialog which is used by apt.

sudo -i
apt -y install dialog
apt update
apt -y upgrade --without-new-pkgs
apt -y full-upgrade
reboot

Once I had the operating system updated, I installed the locales and tzdata packages and set the locale to UTF8

sudo apt -y install locales tzdata sudo dpkg-reconfigure locales

Once I was up to date and the system was working, I upgraded to Debian Bullseye by replacing "buster" with "bullseye" in /etc/apt/sources.list using a text editor and replacing the keyword buster/updates with bullseye-security. Here is what the new file looks like:

deb http://http.debian.net/debian bullseye main contrib non-free deb-src http://http.debian.net/debian bullseye main contrib non-free deb http://security.debian.org/debian-security/ bullseye-security main deb-src http://security.debian.org/debian-security/ bullseye-security main deb http://http.debian.net/debian bullseye-updates main contrib non-free deb-src http://http.debian.net/debian bullseye-updates main contrib non-free

Once the sources.list file was updated, I ran the usual update and upgrade commands again from a root shell:

apt update && apt -y upgrade

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I had to reinstall some of the non default packages I had previously installed on Buster, under Bullseye. These showed up as "held back" packages when doing the upgrade in the previous step. Once I was done, there were no more packages that required update. Now on to installing OpenWebRX.

OpenWebRX is available through multiple developers. I am already familiar with OpenWebRX and wanted to check out OpenWebRX+

Installation steps are outlined on the paged linked above:

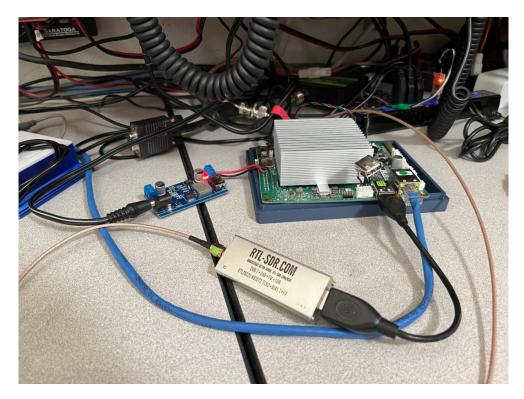
apt -v install wget wget -O - https://luarvique.github.io/ppa/openwebrx-plus.gpg | gpg --dearmor o /etc/apt/trusted.gpg.d/openwebrx-plus.gpg echo "deb [signed-by=/etc/apt/trusted.gpg.d/openwebrx-plus.gpg] https://luarvique.github.io/ppa/debian ./" > /etc/apt/sources.list.d/openwebrxplus.list apt update wget -O - https://repo.openwebrx.de/debian/key.gpg.txt | gpg --dearmor -o /usr/share/keyrings/openwebrx.gpg echo "deb [signed-by=/usr/share/keyrings/openwebrx.gpg] https://repo.openwebrx.de/debian/ bullseye main" > /etc/apt/sources.list.d/openwebrx.list apt update apt -y install openwebrx systemctl enable openwebrx systemctl start openwebrx

Note: The installation will ask you to enter a password for the admin account used to configure openwebrx.

Navigating to http://hostip:8073 brings you to the OpenWebRX receiver page where hostip is the IP address of your Debian linux system. Here is what my main screen looks like after configuring the General settings including my location, Google Map API, etc.



Here are the components for my initial configuration:



I designed a case for the AtomicPi and required voltage regulator.



Admin commands

openwebrx admin adduser [username] openwebrx admin removeuser [username] openwebrx admin resetpassword [username] Reset a user's password openwebrx admin disableuser [username] openwebrx admin enableuser [username] openwebrx admin listusers openwebrx admin hasuser

Add a new user Remove an existing user Disable a user Enable a user List enabled users Test if a user exists

Brian NJ6N

SOARA Nets and Repeaters

As many of you already know, SOARA has nets two nights a week and both Saturday and Sunday. There are also many other nets on our repeaters as well.

We have about seven or eight different net controls for over two dozen available positions every month, depending on whether the month has four or five turns available. We are always looking for more Net Control operators so please apply if you want to join our select group.

In general our nets are friendly and easy going but there are some rules that we should follow, not many thank goodness.

- The FCC requires you to identify with you call sign within ten minutes of getting on the air and every ten minutes thereafter including when you finish the conversation.
- We (SOARA) as well as almost all organizations with repeaters ask you to identify yourself with your FCC issued I.D. when you first get on the air and then follow the FCC guidelines, including when signing off.
- Other than that we try to avoid controversial subjects that might displease or anger others.

Now to the fun part.

• First of all, all SOARA nets are directed nets and the Net Control is in charge.

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- In a conversation with a friend recently we came up with some thoughts and ideas on how to run an amateur radio net and also how to respond to it.
- As Net Control you should try to let your guests do the talking. Guests please feel free to express yourselves.
- Prime them with a good general topic that they can expound on. Guests, if you
 have topical suggestions for the Net please address the Net Control operator with
 your thoughts.
- Net Controls, prepare yourself with some good leading questions ahead of time to ask when you need to get a response.
- If it is a small group let them do a round robin, being sure to remind them who is before and who follows. This will make it easier for you.
- Round robin is from Net Control to the first operator A, then to operator B, then to operator C, and so on until everyone has had a chance to express themselves.
- If one operator has a question for another operator, let the operators go directly one to another as necessary, this will save you time and effort.
- In general make sure that they are enjoying themselves.
- Never put anyone in a position where they might feel uncomfortable.
- As a special note for my Emergency Communications friends, this is for our casual SOARA nets, Emcom lives by a different set of rules.

Nota bene: been there and done that.

Heiko AD601

Swap Meets and Auctions are Back

One of the most fun I have as an electronics enthusiast and amateur radio operator is attending electronic swap meets and auctions. They are great places to pick up some cables, used ham gear, test equipment and much more.

The Yuma Hamfest and Swap meet was held February 18-19 in Yuma, AZ. There were a number of good presentations and a swap meet. As usual, I found some bargains, including 2 BK8514 1200W Programmable DC loads (need repair) for \$40, a Bird 79-2 coax switch (DPDT – rare) and a big variable capacitor and tapped inductor. Plus assorted coax connectors and switches. They also had new equipment for sale in the Exhibit Hall. \$10 for all weekend – a great deal. I highly recommend attending next year.

We have two local swap meets that are up and running monthly.

The TRW Swap meet is held on the last Saturday of each month. The swap meet hours are 7:00 AM to 11:30 AM., located on the southeast corner of Aviation Blvd. and Space Park Drive (one traffic signal south of Marine Ave.) in Hawthorne, CA. More information can be had at W6TRW Swap Meet The next one will be on April 30, which does not conflict with SOARA Saturday, then May 28 and June 25. They even happen on Christmas – attendees are pretty dedicated. SOARA has a booth where excess club equipment is

being sold by Heiko, AD60I. There were about 30 vendor booths in February. My find last month was a a 3 pack of 433 MHz remote controlled outlets for \$20.

The Claremont Amateur Radio Society (CARS) Radio/Electronics Swap meet is held on the third Saturday of each month, except December. 6:00am to 11:00am, at the parking lot of Granite Creek Community Church 1580 N Claremont Blvd, Claremont, CA 91711. There are usually 10 or so vendors selling radios, components and other items. I picked up a AR-22 antenna rotor and control box rebuilt and tested for \$40. The next swap meet is May 21, which unfortunately conflicts with SOARA Saturday.

There was also a used equipment sale at Silicon Salvage in Anaheim. They had a really diverse selection of RF gear, test equipment and assorted stuff. This is a great surplus sale and it is definitely worth going to when they have them.

There is also the former ACP Swap Meet, used to be held on the 4th Sunday of each month at Edinger and Grand in Santa Ana. This event has mostly faded away and there were no vendors the last two months, but I mention it just in case it re-appears.

Remember, one person's "junk" is another person's "treasure".

Dale - W6EDT

SOARA Library

As some of you have already heard the AD60I/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.

Thank you Heiko AD601

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.

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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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2023 SOARA Calendar

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	30 Online	27	20	17	15	19	17	21	18	16	20	-
Program		-	-	-		Field Day Prep	-	-	-	-		-
FCC Ham Exam 6:00 PM		-	-	-		-			-	-		-
Education Classes 8:00 AM			-	-	-	-						-
SOARA Elmer Saturday 9:00 AM	28 WFD Gilleran	Mar 4 Murray Center	18 Murray Center	22 Murray Center	20 Gilleran Park	24 FD Gilleran	22 Gilleran Park	26 Gilleran Park	23 Murray Center	21 Murray Center	25 Murray Center	16 Murray Center
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>	<u>updates</u>
Board Meeting	Feb 6	Mar 6	27	24	22	FD	24	28	25	23	27	-
Special Events	Quartz- fest 17-23	Palm Springs		<u>Visalia</u> DX	Dayton Ham- vention	SOARA Auction 10			SOARA Picnic TBD	<u>JOTA</u> 16-18	SOARA Auction TBD	SOARA Holiday Party TBD
Major HF Contests		ARRL DX-CW 20-21	ARRL DX-SSB 6-7 CQWPX SSB 27-28		CQWPX CW 29-30	ARRL Field Day 23-25			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 Mara- thon	ARRL Field Day 23-25	MV Fire- works 4				Vision Quest OC Mara- thon	

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.

		— 147.645				Laguna Beach
	2m	-146.025	+	(110.9)		San Clemente
		— 145.240				Trabuco
D-STAR	2m	-146.115	+	(K6SOA	C)	Laguna Beach
		-224.100				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
		— 447.180				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

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