



The

December 2019

Propagator

The Monthly Newsletter of the South Orange County Amateur Radio Association

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Soara Elmer Saturday

December 14,
2019
9:00 AM

Gilleran Park
Mission Viejo

SOARA Elmer Saturday (SES) December 14 Gilleran Park - HF Radios and Antennas

2020 SOARA Elmer Saturday Schedule

Below is the proposed schedule for 2020 SOARA Elmer Saturday's (SES). You can also access this information on the SOARA website here: <https://www.soara.org/activities/soara-saturdays/>

I attempt to make SOARA Elmer Saturday's different and interesting. We are making a change to the date for 2020. SES will be the second Tuesday of the month. This will better allow folks to attend the TRW swap meet without conflict. Suggestions for different topics are welcome. Sometimes someone will tell me an idea and it doesn't make it into the schedule. Please email me with suggestions. The 2020 calendar is NOT final yet. Suggestions are still welcome! I can still make changes to February through December events.

The APRS January theme will not change and this is final. I need various presenters. I would like to have a CW SES in the future. I need volunteers on various interesting topics!

Jan 11, 9am-noon, Murray Center (Final)

- APRS, Automatic Packet Reporting System
- Brian NJ6N will demo various aspects of APRS
- Bring your APRS gear!

Feb 8, 9am-noon, Murray Center

- Kit building, soldering, soldering coax / solder gun & solder station
- Bring a kit! Get started building.
- We will demo soldering and safety
- <http://electronics-diy.com/>
- Various Interesting kits

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

Mar 14, 9am-noon, Gilleran Park

- SDR, Software Defined Radio
- RTLSDR, SDRPlay, AirSpy, and possibly others
- demo SDRPlay with Raspberry Pi4, remote 12v operation
- Bring your gear and demo

Apr 11, 9am-noon, Gilleran Park

- Emergency power
- Solar, Battery box, Generator, power cords, other?
- Emergency radio operation
- backpack radio
- radios in ammo cans, etc.
- Bring your gear and demo your ideas!
- This is a great event to update your checklist.

May 9, 9am-noon , Murray Center

- HT handheld transmitter 101
- programing and proper usage discussion
- Software Chirp, RT, and Radio software (Icom, Yaseu, Kenwood...)
- Bring your laptop & USB flash drive!

Jun 13, 9am-noon, Gilleran Park

- Building and construction in the park, Battery box, antennas, etc.
- Need articles to build various types of wire or tubing antennas

Jul 11, 9am-noon, Murray Center

- Noise hunting, RFI, ferrites, noise suppression, grounding
- Field Strength meters, SDRs, what else?

Aug 8, 9am-noon, Gilleran Park

- HF Digital FT8 operation, JTAlert, psk reporter

Sep 12, 9am-noon, Murray Center

- UHF / VHF Digital modes DSTAR, Fusion, & DMR
- Zum Spot, Jumbo Spot

Oct 10, 9am-noon, Gilleran Park

- Demo Antennas in the park
- Dipole, vertical, magnetic loop
- Maybe VLF?

Nov 14, 9am-noon, Murray Center

- Raspberry Pi or Arduino Projects
- <https://dl1gkk.com/>
- Raspberry Pi ham clock and various projects

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Dec 12, 9am-noon, Gilleran Park
• Demo HF Operation in the park

Treasurer's Report FY2018-2019

Below please find SOARA's Fiscal Year End Statement of Revenues and Expenses for 2018-19.

Efforts to get our expenses in line the past couple years have truly paid off, thank you to everyone who has worked hard on this. Please note that on-going expenses for our repeaters are still approximately 74% of our annual budget, but thanks to some generous donations and a growing membership this year we ended the year in a very comfortable cash position.

In October we spent \$1550 to purchase one new and one used Bridgecom repeater to replace the aged equipment on Santiago Peak. This expense will be reflected on our 2019-2020 financial statement.

73 de NI6X
Lori Carey, Treasurer

Revenue:

Membership Dues	\$11,652.00
Initiation Fees	\$920.00

Total Membership Revenue:	\$12,572.00
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Other Revenue:

Auction Commissions	\$329.00
Donations	\$3,238.50

Total Other Revenue	\$3,567.50
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Total Revenue	\$16,139.50
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Expenses:

Repeater Site Rental:

Santiago Peak	\$4,200.00
City of San Clemente	\$120.00

Utilities:

Internet DSL	\$778.02
Telephone Lines	\$2,233.80

Equipment & Repeater Maintenance	\$96.25
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Total Repeater Expenses	\$7428.07
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Website	\$150.02
Insurance	\$704.00
Post Office Box	\$102.00
Corporate Fees	\$20.00
Activities:	
SOARA Saturday	\$0.00
Field Day - Food	\$666.98
Field Day - Other (Generator)	\$615.59
Picnic	\$75.08
Other/Miscellaneous (Young Ham Award)	\$300.00
Other/Miscellaneous (BBQ Grill)	\$389.99
 Total Expenses	 \$10,451.73
 Net Revenue	 \$5,687.77

[Digital Options for Emergency Communications](#)

Since I am a member of MVRACES, a computer engineer by trade and a digital communication enthusiast, I asked myself how I can put all this together for good use in this day and age, for emergency communication purposes.

Caught during one of our MVRACES meetings a discussion about email sending via radio waves using a specialized free software Winlink Express

(<https://winlink.org/WinlinkExpress>) so I decided to make it work as a Hamradio project.

Please retain that although the software is free of charge, to use some features, like Winmor, one needs to pay a fee, one time only.

The software is very powerful and flexible and at the moment I can say that I have tested it successfully via VHF/UHF using packets (Packet Winlink) with a Kenwood TM-D700 and via HF using audio communication (Winmor Winlink) with a Yaesu FT-891.

The Packet way

I have a Kenwood TM-D700 as VHF/UHF base station and for a long time I wanted to be able to program it on the fly using a computer. The rig has an internal TNC that can be used via external software for APRS / Packet communications. Since it has a DB9 COM port connector and I don't have any computer that has a COM port I had to look for a USB2COM cable converter.

Found in my cable box a USB-RS232 Converter similar to the one available from Adafruit



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(<https://www.adafruit.com/product/18>) but since it has a male connector on COM I had to buy a db9 gender changer on Ebay.

Any cable that has an FTDI chip should be able to be used for this purpose.

Testing the software offered by the manufacturer made the programming a breeze!
https://www.kenwood.com/i/products/info/amateur/tmd700a_700e_soft.html

I have installed the Winlink Software on a Windows 7 computer and set up the properties which are the Hamradio's profile details.

Winlink Express Properties

Call Signs

My Callsign: K6FTL My Password: [masked] (Case sensitive) Show password

Callsign suffix (optional): (Used for country code)

Password recovery e-mail: k6ftl@mail.com (Non-Winlink e-mail address where lost password will be sent when requested)

Remove Callsign Request password be sent to recovery e-mail

Auxiliary Callsigns and Tactical Addresses

Add Entry Remove Entry Edit Entry

My Grid Square: DM13DO Lat/Lon to Grid Square

Winlink Express registration key: [masked]

Service Codes

PUBLIC (Use PUBLIC for ham call signs. Separate multiple service codes by spaces.) If you change service codes, you must update the list of channels.

Contact Information (Optional)

Name: Alex Stoica

Street address 1: 25855 Triton Ct

Street address 2:

City: Mission Viejo

State/Province: California

Country: USA

Postal code: 92691

Web Site URL (optional):

Phone number:

Non-Winlink e-mail: k6ftl@mail.com

Additional information (optional):

Recalculate HF path quality if SFI changes more than: 30

Keep logs for 2 weeks. Keep deleted messages for 30 days.

Display list of pending incoming messages prior to download

Warn about connections to stations holding messages

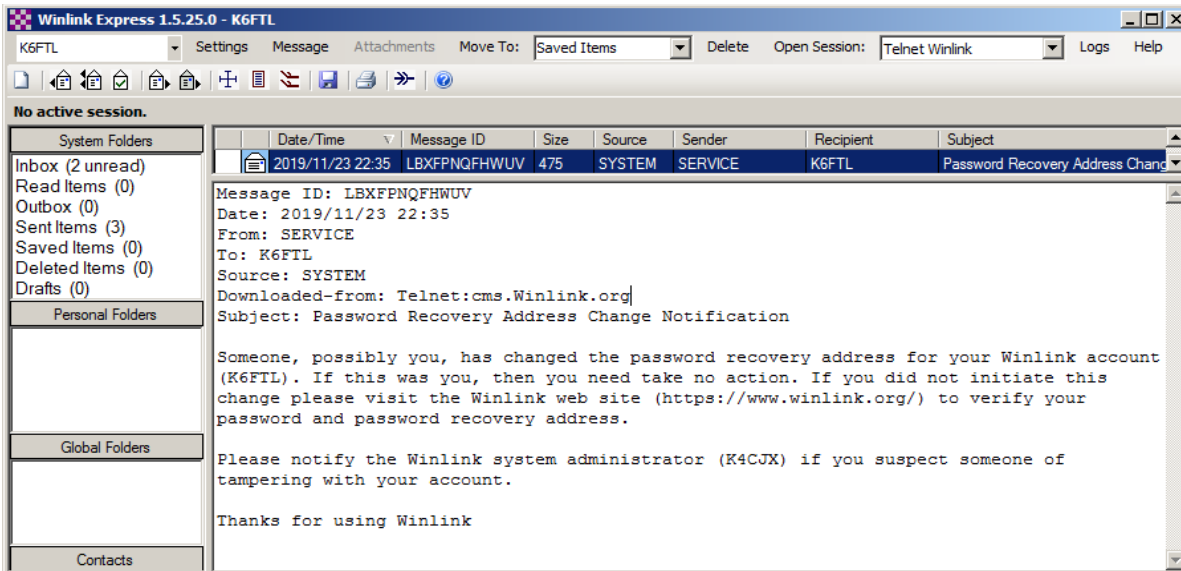
Allow diagnostic information to be sent to the Winlink Development Team

Automatically install field-test (beta) versions of Winlink Express

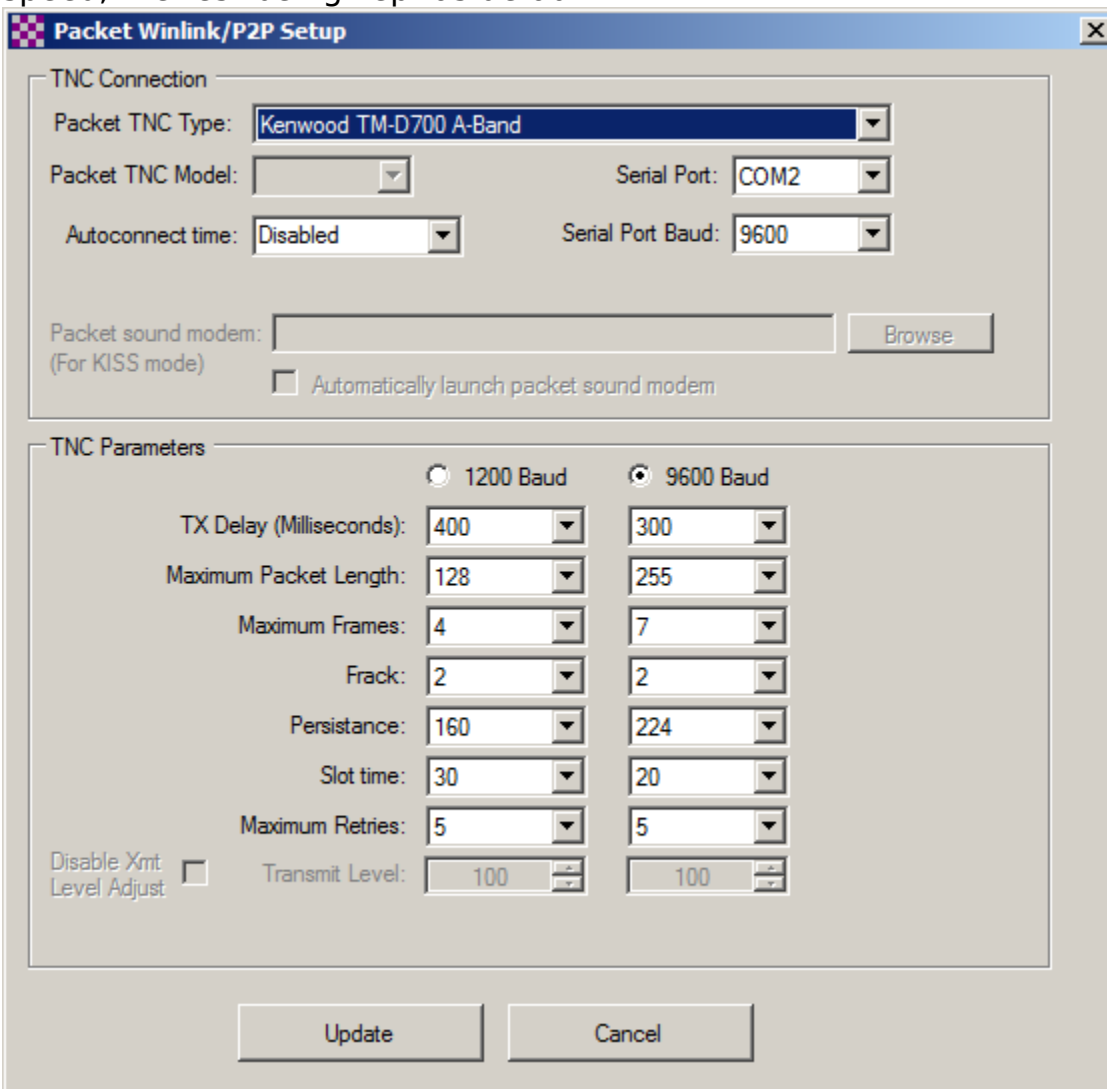
Update Cancel

After setting those details I finished up the registration, as recommended, by Opening a Telnet Winlink session. That confirmed the new winlink account and allowed going further with the next step.

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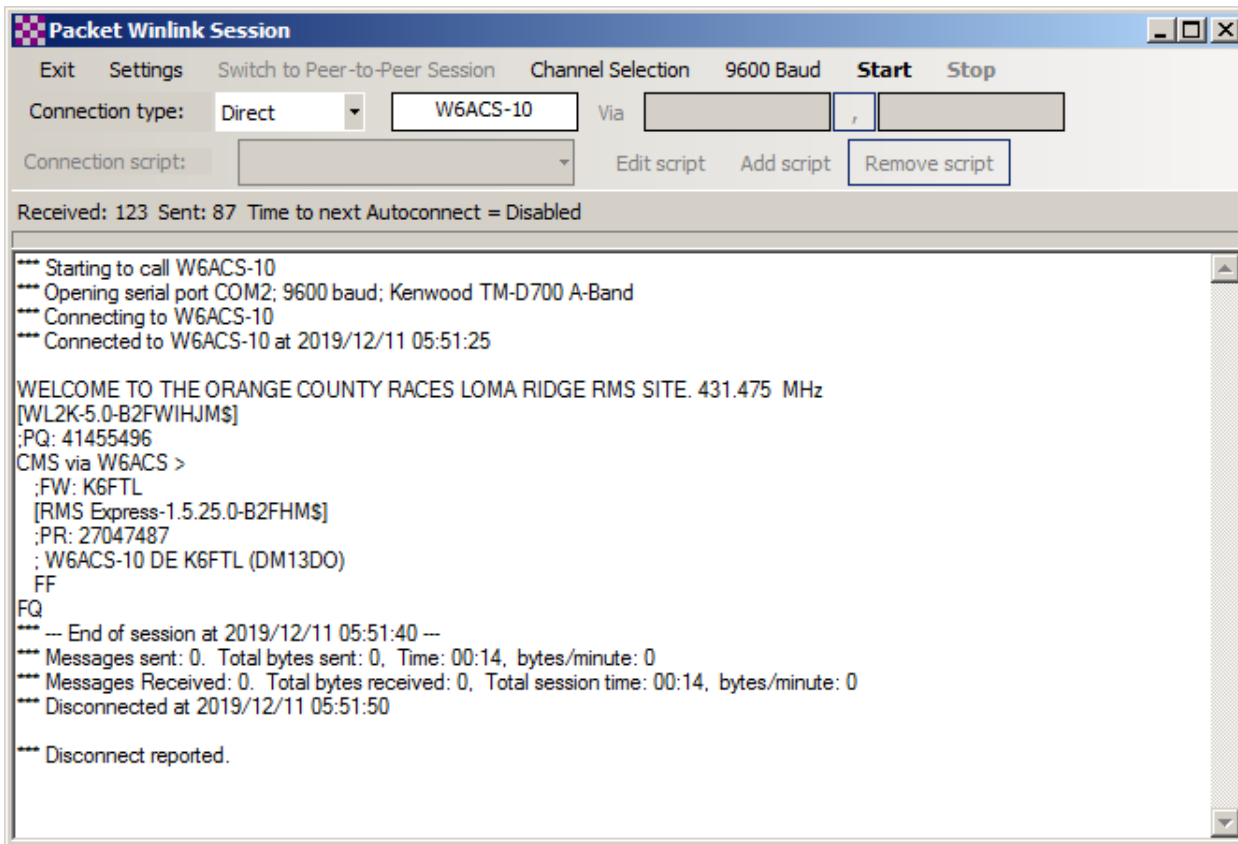


In my case I have Opened a Packet Winlink session and within the new opened window I had to provide the hardware connection details, the COM port and the 9600baud for speed, the rest being kept as default.



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Before connecting to a Winlink channel I have updated the list via Internet and picked one up that seemed close to me, W6ACS-10. I hit Start and I got the connection!

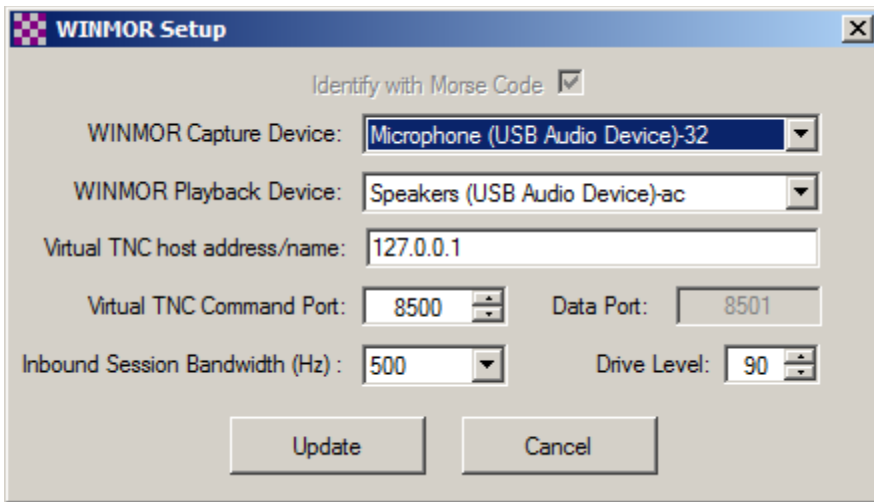


The Audio way

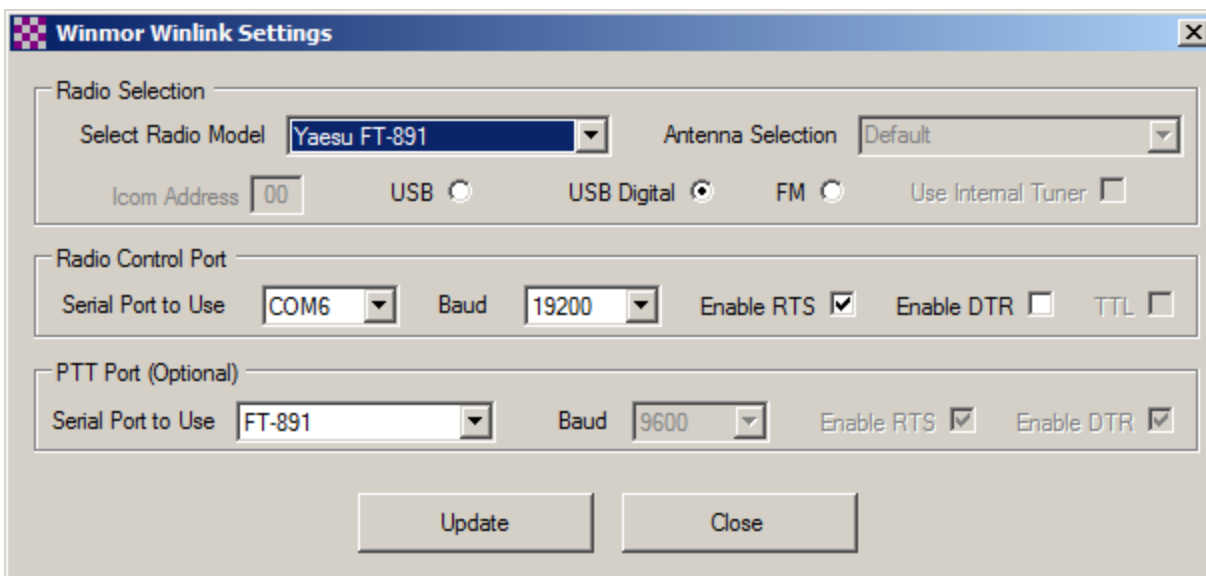
Basically, one can re-use the same software setup with any other rig even if it does not have a TNC or Packet available. In my case I tested it using Winmor Winlink via an Yaesu FT-891 that I had it connected via a homemade cable out of a MiniDIN 6 / PS2 cable and a TRRS 3.5 jack that fed the audio signal out of the rig into a USB Soundcard (<https://www.ebay.com/itm/USB-to-3-5mm-Jack-Headphone-Stereo-External-Audio-Sound-Card-Adapter-Converter/303181522643>) which by the way I have used it successfully for FT8 instead of Signalink.

In order to use Winmor Winlink, one has either to pay for the license for Winmor, or for the license of Winlink Express, either one will do and the license code can be used for both.

The setup for this is similar for any other digital modes using SoundCard where one needs to pick up Input/Output from the USB Sound Card.

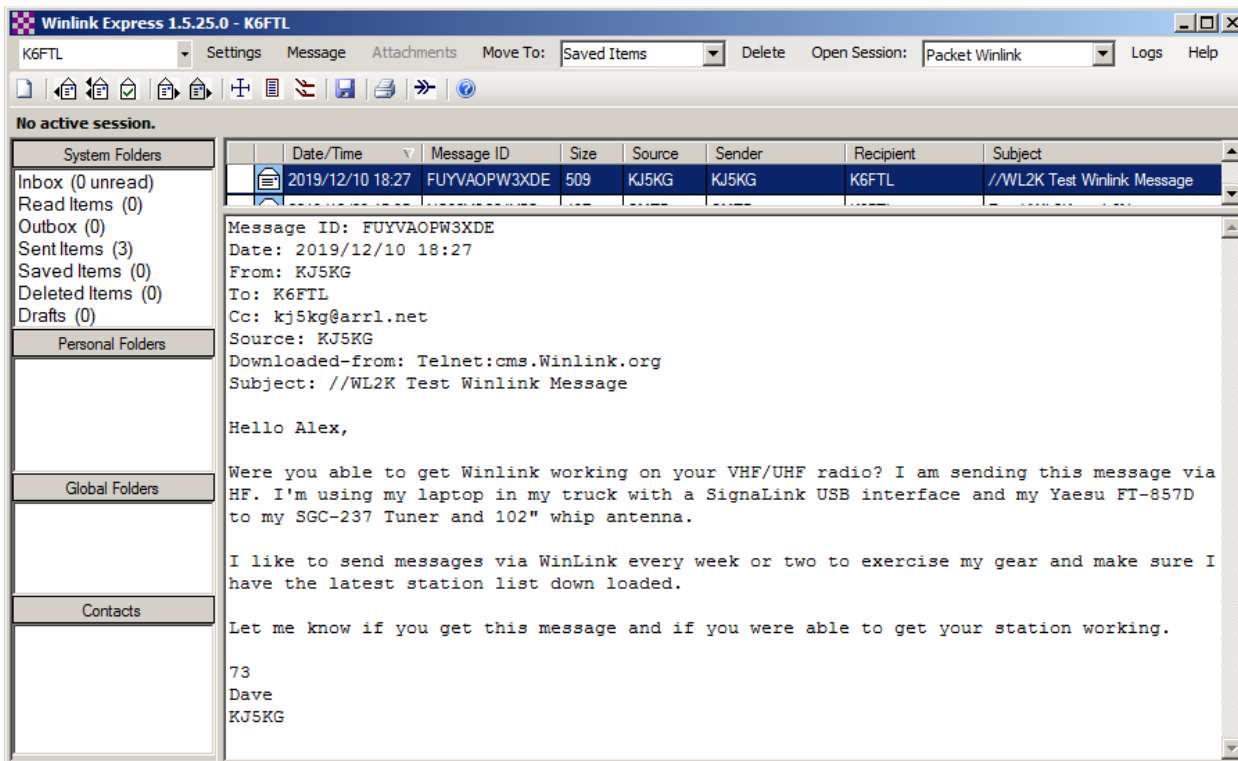


And the radio control for the rig that is used for this purpose



After all is set up and the channel list is updated via Internet, comes the fun part where a connection is established but allow some experimentation on this since not all the available channels can be connected to.

I believe that this tool can be very useful in a lot of situations not necessarily in Emergency Communications but since it all started from a discussion with David, KJ5KG, here's the proof that it actually works!



Next project that I have in mind is how I can replicate the same but using an HT like Yaesu FT-60R and audio setup.

73 de Alex | K6FTL

[Disaster Communications](#)

By Gordon (WB6NOA) West from the November 1992 West Coast Amateur Radio Club Newsletter.

Those two recent hurricanes in Florida and Hawaii underscore the Importance for every ham to be well-prepared to handle on-scene distress calls. And while it is advisable to take advance training in emergency message handling from groups like races, ares, and the American Red Cross--it's important to know that you can be an effective emergency communicator taking on the lessons learned during the last two hurricanes.

Getting back on the air. A good emergency communicator can get back onto the local and worldwide airwaves 'fast' after an emergency. Here is where a mobile or base station that runs off 12 volts really shines! (in more ways than one). Just add 12 volts from any vehicle, Destroyed or not, and you are back on the air. I like the little 12-Volt gel cell (7 amp hour variety) because i can plug that into a Vehicle's cigarette lighter plug, and "float" my 12-volt receiver.

Some vehicles were so badly damaged in the past hurricanes that The ham operators couldn't get at their batteries. The hood just wouldn't open. But guess what--most of the vehicles still had their electrical system intact, and on most vehicles the cigarette lighter

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receptacle usually remains "hot" even though the vehicle is turned off. For coax cable for your antenna system, you could quite easily get by with 72-ohm cable tv coax. In an emergency, the slight mismatch will still let you get on the air. A simple dipole is easily fashioned out of any downed wiring, and just remember the formula 468 divided by the frequency in mhz, and this is all the wire you will need for a particular band. Cut the wire in half, and attach the one-quarter wavelength to the braid of the coax in one direction, and the other one-quarter wavelength of the wire to the center conductor of the coax and run it in the other direction. Get it up off the ground by at least a half a wavelength, and you are on the air with a resonant dipole for a single band.

On the 2-meter band, 18 inches of wire jammed in the back of your mobile transceiver will go quite nicely. Go through the memorized channels in your set, and see if you can find a repeater that can get good coverage for the devastated area you are in. Hopefully it will give enough coverage to get to someone outside of the area to be able to handle emergency traffic for you. On the world wide bands, come up on a band--such as 15, 20 or 40 Meters--where you hear activity. If you are one of the first stations on the air, break into a conversation using the triple break which signifies life and death emergency traffic. If you can't break into the net, chances are you didn't get your antenna system up properly, and look and see what's going on with your wires. If they're coming in over signal strength 7 on your worldwide set, you should surely be heard with a triple break. If you are one of the first on the air, the 20 meter band is a great place to get some help over long range, and your antenna requirements are only 16 feet of wire on each side of your dipole. 14.275 mhz is a common meeting spot for widespread disasters. This frequency is monitored regularly by members of the international amateur radio network (iarn), and these eager-beavers are always on the prowl for any disaster that they can offer assistance.

If you're in the disaster area, first handle outgoing traffic. You'll get many calls from other hams wishing to inquire about a certain street address inside the disaster area, and is the house standing or not. Unfortunately, your priority is outgoing traffic, not incoming inquiries. As you begin to receive outgoing messages where the typical message is, "we are ok, don't worry. We will call as soon as telephone service is restored. Don't worry," signify this as simply Arri message one. You will find a list of arri numbered radiograms in the back of the arri radio station log book.

During the last two emergencies, some pieces of outgoing traffic were taking as long as 2 or 3 minutes to pass in their entirety! Yikes, this is nuts--you should be able to send a complete outgoing message, by voice, in less than 30 seconds. If the operator at the other end of the circuit can't take it down that fast, this suggests someone else come in to handle the communications more efficiently. If you have digital communications for hf or vhf, all the better.

This way, numerous stations can help you out. So are you ready to handle it when the big quake hits here in southern California? Do you have the backup equipment that can run truly portable to get you back on the air within minutes after the shaking stops? Do you have a small 6 or 7 amp hour gel cell battery to act as buffer between your hf rig and an alternate source of 12 volts? How about a vice-grip type of hf antenna mount

to clamp onto anything metal to use as a ground plane for your mobile whip? That's a great way to get on the air without having to find 2 trees that are still standing to stretch a dipole.

Remember, if you're in the middle of the disaster area, you don't need to be a member of ARES or RACES to take part in outgoing emergency communications. But then again, joining either of these organizations, plus the American Red Cross, wouldn't be a bad idea, either!

[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/>

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

Brian NJ6N

2019 SOARA Calendar

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	28	25	18	15	20	17	15	19	16	21	18	-
Program	DXpedition	-	-	-	Spring Auction	Field Day Prep	-	SOARA Fair	-	-	Fall Auction	-
FCC Ham Exam 6:00 PM	28	25	18	15	20	At Field Day (2pm)	15	19	16	21	18	-
Education Classes 8:00 AM	Tech 26	-	-	Tech 13	General 18	Tech 15	Extra 13	Tech 17	General 14	-	Tech 16	-
SOARA Elmer Saturday 9:00 AM	Feb 2 Murray	Mar 2 Murray	23 Murray	20 Gilleran	25 Murray	22 Gilleran	20 Gilleran	24 Murray	21 Murray	26 Gilleran	23 Gilleran	-
SOARA T-Hunt 1:00 pm	-	-	-	-	-	-	22	26	23	28	25	-
Board Meeting	Feb 4	Mar 2	25	22	28	-	22	26	23	28	25	-
Special Events	Quartz-fest 20-26	Yuma 15-17		Visalia DX 12-14	Dayton Ham-vention 17-19	ARRL Field Day 21-23	HRO Ham Jam -	SOARA Picnic August 4		JOTA		SOARA Holiday Party 1
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 21-23	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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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	
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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:

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
wa6ed@soara.org

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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