



THE

# PROPAGATOR

The Monthly Newsletter of the South Orange Amateur Radio Association

September 2012

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## Meeting

Sept. 17th,  
2012

7:00 PM

N.P.

Murray  
Center

Veterans  
Way  
Mission Viejo

## "You Could Be a Transmitter Hunting Champion!"

Nowadays, a transmitter hunt is much more than just a ride in an RDF-equipped car. It can also be an exciting outdoor activity for everyone in the family. Find out about the wide variety of ways that you, your family and your club can have fun with RDF. Learn about mobile T-hunting, radio-orienteeing and ARDF. You may already have all the equipment you need to get started. Keep at it and you might join the hams who have won medals at international championship foxhunts in recent years.

**Joe Moell, K0OV**, has written for almost every ham radio publication and designed many new devices for radio direction finding (RDF). His book "TRANSMITTER HUNTING---Radio Direction Finding Simplified," is

the definitive text on RDF for hams, and he has written over 250 magazine articles on RDF topics. In addition to being a Technical Advisor on RDF to ARRL Headquarters, he serves as ARRL's ARDF Coordinator and oversees the yearly USA ARDF Championships. He also moderates the annual CQ Worldwide Foxhunting Weekend.

For more information on transmitter hunting, visit Joe's "Homing In" site on the World Wide Web:

<http://www.homingin.com>



## From the Ambassador (AD6OI)

Thoughts, ideas and the future of ham radio as it pertains to our club:

We (SOARA) have a multi-faceted club with various strengths and many skilled people amongst our membership. Our commonality is the combination of a social club and a special interest group. As such we have many avenues available to us. We can meet for coffee or lunch or even dinner at a good restaurant and talk about what ails us individually or as a group. For the most part we tend to avoid sensitive topics that might offend other people. We also do many radio related special events, these include but are not limited to helping others (elmering), contesting, emergency communications (ARES, RACES,) support for races and charity events (MS ride). As long as we keep in mind that what we think of as our hobby, is really a service to the rest of the

world and its betterment. Having said that I have several things in mind that could increase our value to others; whenever you hear of someone in need of anything be it material or otherwise do not keep it to yourself, tell others, ask them if they would like to help, and go out and fix the problem. Personally, I have a serious problem with others who tell me that something is not right in this world but have no intention to do anything but talk about it. Let's go out and help where we can.

Having pontificated sufficiently I should remind you that we have membership renewals, club meetings (Sept.17) auction in November and our Holiday Party in December so keep your ears tuned to the radio and your eyes on our website and Facebook page.

Thanks, Heiko AD6OI



**SOARA Saturdays: Fox Hunt**  
Sept. 22

**CQ WW DX Contest (RTTY)**  
Sep 29-30

**Tucson Ham-fest & Fly-In**  
Oct. 6

**Pacificon**  
Oct. 12-14  
Santa Clara, CA

**CQ WW DX Contest (SSB)**  
Sep 29-30

**Holiday Party: Antonucci's**  
Dec 1

## VEC License Exams

Next session: (5:30pm), before the General Meeting  
Contact Sean [AJ6B](mailto:AJ6B) for info.

Walk-ins ok.

Extra | General | Technician Exams

## SOARA Saturdays

The next SOARA Saturdays (on 9/22), will feature an on-foot transmitter (Fox) hunting session, starting from the Norman P. Murray Community Center. If you've heard about on-foot hidden transmitter hunting but haven't tried it, or if you are a beginner that needs some practice and guidance, this free introductory session is for you. A ham radio license and knowledge of radio equipment are not required. Experts will be on hand to teach you the basic techniques of on-foot radio direction-finding (RDF). Bring the kids and grandkids, then go out on the course with them!

Sean Reigle, AJ6B, is hosting this session, with Joe Moell, K0OV. Please plan to arrive at the Community Center **by 9 AM** for a brief classroom introduction to on-foot transmitter hunting, followed by an opportunity to find some two-meter band transmitters located in the surrounding park.

There is no charge for this event. A limited amount of radio direction finding gear will be available for loan. If you have receivers, scanners, directional antennas, attenuators, or other equipment suitable for on-foot RDF, be sure to bring it. Make sure all batteries are fresh. All ages are welcome, but young children must be accompanied by an adult at all times.

## Holiday Party News

Mark your calendars! We are booked at Antonucci's for Saturday, December 1st @ 6:00. More details will follow in future Propagators.

## SOARA Library

SOARA has received donated amateur radio related books such as hand books, books about electrical theory etc. Also I have a fairly extensive library of more of the same which I would be willing to lend out to club members who are interested in reading them. I will compile a list of books available for loan if there is any interest in it.

Heiko Peschel  
[ad6oi@soara.org](mailto:ad6oi@soara.org)

## Pacificon 2012

Please click here for more information:  
[ARRL National Convention](http://arrl.org),  
<http://pacificon.org/home.html>



Sean, AJ6B's post at the Gorman Ridge Rally on 8/25/12



A racer at the Gorman Ridge Rally



### From Membership

SOARA's membership year starts in October and ends in September. This is the last month of the present fiscal year and this means that it is time for membership renewal.

Our total membership right now is 224 and we hope it will continue and even grow.

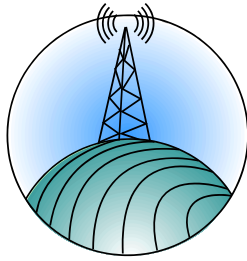
Welcome to our newest member,

**Larry Risser,**  
AG6OU,  
an Amateur extra  
from Mission  
Viejo.

Please extend a special welcome to our newest member if you see him at the meeting or any other events.

Welcome, Larry!!

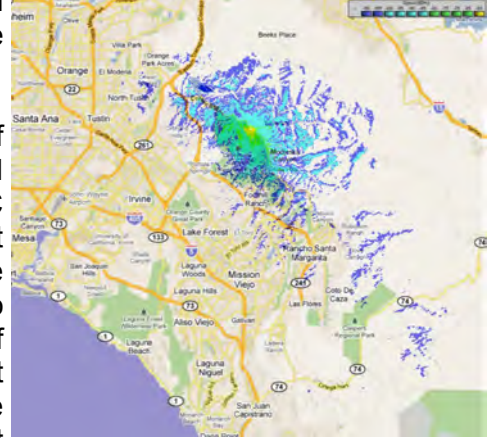
Horst Zitzmann,  
KD7JHR  
Marie Zitzmann,  
KD7JHS



## T-Hunt Report

September's hunt was spectacular for two reasons. First, Alan and I beat Richard, K6RBS, and second, we got the "I Found It First" ribbon which will be now and forever known as the "SOARA Monthly T-Hunt I Found It First Perpetual Ribbon," or the SOARAMTHIFIFPR, for short.

Dave, KG6QCI, did a good job of hiding the transmitter. Alan and I started out from a reasonably high location in SJC and heard absolutely nothing so we started out towards the freeway which we figured would not be too crowded on a Sunday. Wrong. Bumper to bumper traffic. After going north, we finally got off at Oso and headed east to the 241. Knowing that Dave lived in Trabuco Canyon, I figured that he would probably hide somewhere in that vicinity but as we traveled north, I began to think that perhaps I might be mistaken because we didn't hear anything. Going further north, we finally heard something near the Santiago Road off-ramp. At that point, we turned right and headed south. As we rounded a curve just north of the turn off for Silverado and Black Star Canyon, the signal came up real strong so I knew we were on the right track.



We continued south on Santiago Canyon Road and the signal seemed to be peaking and then dropping off and finally dropped way down and appeared behind us so we turned around and headed north. We turned toward Silverado and went as far as the USFS ranger station before turning around again after realizing we were not going in the right direction. Back south again on Silverado Canyon road. The signal strength indication on the blue box receiver said "5" which told me that we were practically on top of the transmitter. We pulled off the road and got out. Looking around and down the embankment, all I saw was what looked like was a roadside memorial made of aluminum foil a ribbon.

Not seeing the transmitter, I went back to the vehicle and was listening to the transmitter again when Alan started yelling at me. As I got out of the car, Richard drove up. Alan said that he saw the transmitter behind the "memorial". His eyesight must be a lot better than mine because I didn't see it until he pointed out the box to me. Alan was stoked because we "beat" Richard by a few seconds. Hey, we'll take it!

The SOARAMTHIFIFPR will be passed on the next winner of the SOARA monthly t-hunt and so on and so forth, ad nauseam. Failure to do so will result in one's receiver becoming numb and constantly breaking squelch.

73 de Gray, WA6BJY



**Dale, KC0AQV, Pierrette, K6PTR and Bob, KB6DON, helping out at the Taco Run on 8/21.**



### Raffle Report

The raffle was held at the general meeting August 20, 2012. The \$5 prize (still pending) was a FT-7900R.

The \$1 prizes consisted of a 2006 ARRL Handbook, a set of pliers and cutters from Harbor Freight, a general class license manual, a Yaesu baseball hat and a set of MFJ headphones.



For September, we will continue the raffling off a [Yaesu 7900R](#) dual band mobile VHF/UHF Radio. It is your basic 2M/440MHz radio. It is a good starter mobile radio. It covers 2M and 70cm.

It displays one band at a time. We need to sell another 43 tickets to raffle the radio.

[WB6WXO@SOARA](mailto:WB6WXO@SOARA)

## Some HF Contests

- SC QSO Party (Sep 15-16)
- FOC QSO Party, CW (Sep 22)
- CQ Worldwide DX Contest, RTTY (Sep 29-30)
- Texas QSO Party (Sep 29-30)
- Oceania DX Contest, Ph (Oct 6-7)
- California QSO Party (Oct 6-7)
- PA QSO Party (Oct 13-14)
- AZ QSO Party (Oct 13-14)
- NY QSO Party (Oct 20-21)
- IA QSO Party (Oct 20)
- CQ Worldwide DX, SSB (Oct 27-28)

## Propagation de K7RA

Solar activity retreated this week. Average daily sunspot numbers were off nearly 46 points, or about 35%, to 83.1. Average daily solar flux declined 18 points to 118.9.

Geomagnetic conditions were quieter, with the planetary and mid-latitude A index most days in the single digits. Average planetary A index declined from 14.1 to 6.6.

The predicted daily solar flux is 100 on September 14-15, 95 on September 16-18, 98 on September 19, then 100, 95 and 100 on September 20-22, 110 on September 23-24, then 115, 125 and 130 on September 25-27, 140 on September 28 through October 1, 135 on October 2, and 130 on October 3-5.

### ARRL News: [FCC Releases Congressionally Mandated Study on Amateur Radio](#)

On August 20 -- in response to a Spring 2012 Congressional directive -- the Federal Communications Commission released its findings on the Uses and Capabilities of Amateur Radio Service Communications in Emergencies and Disaster Relief: Report to Congress Pursuant to Section 6414 of the Middle Class Tax Relief and Job Creation Act of 2012.

This report contains the FCC's "review of the importance of emergency Amateur Radio Service communications relating to disasters, severe weather and other threats to lives and property in the United States; and recommendations for enhancements in the voluntary deployment of Amateur Radio operators in disaster and emergency communications and disaster relief efforts; and recommendations for improved integration of Amateur Radio operators in the planning and furtherance of initiatives of the federal government." It also required "that the study identify impediments to enhanced Amateur Radio Service communications and provide recommendations regarding the removal of such impediments."

"There are many positive things included in the FCC report to Congress," said ARRL Regulatory Information Manager Dan Henderson, N1ND. "We are pleased that the Commission highlighted the existing Amateur Radio infrastructure to provide disaster and time-critical communications. They also recognized the flexibility of the Amateur Service in working with federal, state, local and tribal emergency service agencies to supplement existing communications. The affirmation of the value that Amateur Radio brings to the communities across the country is underscored by the suggestion that 'DHS work with state, local, and tribal authorities so they may develop disaster area access or credentialing policies for trained amateur operators, including a means for documenting their qualifications...'"

While the FCC did hold Amateur Radio in a positive light in its discussion of emergency Amateur Radio Service communications, **the FCC report was not as favorable in the portion of the study that addressed impediments to enhanced Amateur Radio Service communications.** In the comments provided to the FCC as they prepared the study, the ARRL -- as well as numerous individuals -- cited the proliferation of specific land-use restrictions, such as deed restrictions and homeowners associations covenants, that prohibit the erection of even modest Amateur Radio antennas.

The ARRL cited that such restrictions now apply to tens of millions of homes and condominiums. In communities across every state, these restrictions make finding suitable living arrangements that would also allow amateurs to participate effectively in providing support communications nearly impossible to find. The FCC disagreed with that assessment stating "...our review of the record does not indicate that amateur operators are unable to find homes that are not subject to such restrictions. Therefore, at this time, we do not see a compelling reason for the Commission to revisit its previous determinations that preemption should not be expanded to CCRs."

...  
With the delivery of the FCC's report to Congress, the ARRL will determine its next step in its efforts to find relief for amateurs who live under unduly restrictive private land-use regulations. "Our review of the FCC report shows that there is a lot to be done if amateurs living in deed-restricted properties are to receive even the limited relief they enjoy under the Commission's PRB-1 ruling or the limited relief given to deed-restricted properties given by the FCC's OTARD ruling," Henderson said. "This means continuing ARRL's efforts on Capitol Hill and continuing to seek a Congressional directive to the Commission to extend those limited preemptions to include prohibition of effective Amateur Radio antennas and support structure that are imposed by private land use restrictions. The FCC report to Congress is not the final action in this fight. It merely lays the groundwork for the next steps to be taken by the ARRL," he concluded.

Read the complete FCC report on the web at, [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2012/db0820/DA-12-1342A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0820/DA-12-1342A1.pdf).

Year 2012	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	23	27	19	16	21	18	16	20	17	15	19	—
Program	Ham Jeopardy	T32C DXPed Report	K6IRD	H.S. Tech	Spring Auction	Field Day Prep	DIY	SOARA Fair	T & Fox Hunting		Fall Auction	—
VEC Testing	23	27	19	16	21	Field Day	16	20	17	15	19	—
SOARA Saturdays (9am)	28	Mar 3	24	—	26	—	—	25	22	20	24	—
SOARA T-Hunt	8	12	4	1	6	3	1	7/29	2	7	4	2
Board Meeting	30	Mar 5	26	23	28	25	23	27	24	22	26	—
Special Events	Palm Springs 28	ARRL Yuma 17-18			Dayton 18-20	Field Day	Ham Jam 21	Picnic		Pacificon 12-14		Holiday Party 1
ARRL Field Day						23-24						
SOARA Picnic								5				
Holiday Party												1

**SOARA** meets at the Mission Viejo Community Center, 26932 Veterans Way, Mission Viejo, 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. Exams are from 5:30 to 7:00 PM. Prior registration is not required and walk-in applicants are welcome. For further information, email Sean Reigle, AJ6B, at [aj6b@soara.org](mailto:aj6b@soara.org).

**Contacting SOARA:** Questions about SOARA?  
Postal mail: P.O. Box 2545, Mission Viejo, CA 92690.  
Send e-mail to: [info@soara.org](mailto:info@soara.org), or leave a message at 949-249-1373.

**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, KG6GI.

- 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 — (123.0) Santiago Peak. (C)
- D-Star 440 — 445.660 — (K6SOA B) Laguna Beach
- 440 — 447.180 — (131.8) Santiago Peak. (C)
- D-Star 1.2G — 1282.600 — (K6SOA A) Laguna Beach

**Nets:** UHF/VHF (447.180, 147.645 & 224.640): Tuesdays 8:00 PM  
D-Star (146.115 C module): Wednesdays 8:00pm  
40 meter HF (7.200 MHz +/- for QRM), Sundays 8:00 AM.  
Gordo Net (HF 7.250 MHz +/- for QRM), Weekdays 8:30AM

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## Ham Radio 101 - Ham Radio Building Blocks

### How to get Started Home Brewing

By Hal Silverman, WB6WXO

The last several articles have been devoted to building blocks that go into ham radio rigs. I have presented simple circuits that I have breadboarded and used for demonstrations at the seminars. It has occurred to me that some of you may want to also breadboard circuits and test them out. I am by no means a design genius. I rely on the ARRL Handbook, an ARRL QRP Classic hand book and some QST articles. I also have some of the lab manuals that I used at both Saddleback and OCC as an instructor. There are many good examples of circuits in those manuals to breadboard and analyze.

The local ham radio store (HRO) has the ARRL Handbooks for sale. You can also buy the handbook directly from the ARRL. If you have a limited budget, try the local used book stores. The handbooks do not have to be the latest version. In fact, I use a 1969 handbook for reference for many things that do not appear in the present day books.

Good equipment is an essential requirement to be able to analyze your circuits. Here is my recommended list to get started:

#### **Soldering Iron** (Weller Products)

These are available on line at Mouser or Electronix Express  
Look for one at the SOARA auction.

#### **Digital Multimeter** (Prices range from \$10.00 to 160.00)

Harbor Freight usually has these for about \$10.00  
Fry's has Fluke meters for up to about \$160.00  
You might also look for one that checks capacitance.

#### **Oscilloscope** (It is best to shop around for one of these)

Electronix Express has a good selection that range of prices from \$300 to \$1200. The cost goes up as you increase the features.

I would ask around SOARA to see if anyone has a scope for sale.  
I would also recommend eBay.

#### **Regulated Power Supply**

Since most of the solid state rigs use 13.8V, you can pick up an Astron supply that has about 4 amp capability.  
That will be enough to power a small QRP radio.  
Look for one of these at the SOARA auction.



*Continued on the next page...*

## Ham Radio Building Blocks (continued)

### Solderless Breadboards

These are a must, some come with a collection of jumper wires.

Places like Fry's, Mar-Vac, Or-Vac, and JK Electronics have them on sale for about \$20.00

### Components

Resistor, capacitor and inductor kits are available at a reasonable price. I have used them to get a supply of 1/2W resistors to rebuild my Heath Kit projects. I usually purchase them from either Electronix Express or from Mouser.

Other items like chassis, and solder type proto boards are also available from both the places named above.

If you just need one or two parts to repair a radio, then places like Radio Shack, JK Electronics (Westminster), and Fry's (Fountain Valley) are good sources of small quantities. I use all three places for my needs.

Mouser will ship almost the same day or the next day. Electronix Express is a little slower shipping.

The other local stores may order for you if they don't have it in stock.

The places that I use have web sites which I will provide in the appendix of this article.

If you get into a specialty project like restoring a piece of Heath Kit equipment, then there is a Yahoo Heath Kit users group. I have a source for manuals from Dave Crowell (KA1EDP)

There are several places that have Heath Kit replacement parts as well as kits to upgrade older rigs.

I have a source for vacuum tubes for that older rig you bought at the SOARA auction.

Well that is a start for the beginner and even for the advanced experimenter. One thing I almost forgot to mention is that having several older handbooks is essential. I found myself referring to my older handbooks for such things as drill sizes for a 6-32 clearance hole. Some of the older ARRL handbooks have that information. I had to refer to my 1969 ARRL Handbook to find instructions for terminating RG-8 cables.

If you have any questions regarding this article, let me know. You can e-mail me at:

[WB6WXO@SOARA.org](mailto:WB6WXO@SOARA.org)



## Ham Radio Building Blocks (continued)

### Appendix: Sources of Electronic Parts\*

Action Electronics:

<http://www.action-electronics.com/>

1300 E. Edinger Ave

Santa Ana CA 92705-4425

Phone (800) 563-9405 or (714) 547-5169

Mar-Vac:

<http://www.marvac.com>

1-800-655-6686 949-650-2001

2001 Harbor Blvd.

Costa Mesa, CA 92627

Frys:

<http://www.frys.com>

Fountain Valley - 1080 Kalma River Ave

714-378-4400

Anaheim - 3370 E. La Palma Ave

714-688-3000

JK Electronics:

<http://www.jkelectronics.com>

[sales@jkelectronics.com](mailto:sales@jkelectronics.com)

6395 Westminster Blvd

Westminster, CA 92683

714-890-4001

Digi-Key:

<http://www.digikey.com>

1-800-DIGI-KEY

Mouser Electronics:

<http://www.mouser.com>

1-800-346-6873

Electronic Express:

<http://www.elexp.com>

E Mail: [electron@elexp.com](mailto:electron@elexp.com)

1-800-972-2225

Antique Electronic Supply:

<http://www.tubesandmore.com>

E Mail: [sales@tubesandmore.com](mailto:sales@tubesandmore.com)

1-480-820-5411 ph

1-800-706-6789 fax

*\*This list is included for the convenience of the reader. SOARA does not endorse the above vendors.*