



The PROPAGATOR

April, 2005

The Monthly Newsletter of South Orange Amateur Radio Association

SKYWARN Presentation	T-hunt	March Meeting Revisited
<p>At the April meeting on the 18th, Lee Thomas, KF6POI, and Mike McLaughlin, KJ6EO, will explain the SKYWARN program and how Ham operators may aid the National Weather Bureau's forecasting abilities.</p> <p>SKYWARN is a concept developed in the early 1970s that was intended to promote a cooperative effort between the National Weather Service and communities. The emphasis of the effort is often focused on the storm spotter, an individual who takes a position near their community and reports wind gusts, hail size, rainfall, and cloud formations that could signal a developing tornado. Another part of SKYWARN is the receipt and effective distribution of National Weather Service information.</p>  <p>Jim, K6LIO <input type="checkbox"/></p>	<p>It was a pleasant Sunday with a bright sunny sky but not yet hot. A great day for a T-hunt. The SOARA T-hunt regulars were all prepared to go at 1:00 PM. The transmitter was loud and clear — but it wasn't the hidden transmitter. None of the hunters was hearing the hidden "T" with the W8RRV ID. I didn't think I had hidden it that well. And it was running 5 watts. (There is a cooling fan in the "fox box.")</p> <p>After becoming convinced that (1) it was radiating and (2) no one had a signal, I gave a general direction to start the hunters toward the area. Dave, KG6QCI, has a new toy — a Ramsey DDF1 doppler system — and he and Richard, K6RBS, put it to good use. The advantage of the Doppler system is that you get direction information while you are driving, you don't have to stop to take readings. Once Dave and Richard got the signal they zeroed in on the location quickly. If you visit the SOARA web site and click on the "T-Hunt" button you can read Richard's description and see photos of the hiding place.</p> <p>Dave and Richard found the "T" at 2:07, followed by Joe, W6BGR, at 2:45, and Kareem, KG6USK, at 2:46. By 3:00 all of the hunters had found the hidden "T" and maps to a nearby park where refreshments were waiting. There everyone enjoyed checking out equipment, swapping stories and eating hamburgers. All agreed it was another successful hunt. Dave and Richard will hide the "T" next month. (de W8RRV) <input type="checkbox"/></p>	<p>John Hoot, N6NPH, entertained SOARA members once again by presenting the complex in a simple to understand manner.</p> <p>N6NPH explained the need for broader bandwidth to communicate with existing space probes and the proliferation of robotics investigating Mars surface. Presently, 70 meter, 34 meter and 6 meter diameter dishes are used at three (3) sites through out the world. These are at Goldstone (USA), near Madrid (Spain) and Canberra (Australia).</p> <p>To alleviate the overloading of the present system, several methods will be employed. First is the use of higher frequencies, the Ka microwave band at 32 GHz. This alone will increase bandwidth by a factor of 16. The three earth station sites are located in areas that offer a dry medium for the Ka band. Ka microwave frequencies are easily attenuated by moisture in the atmosphere.</p> <p>Other methods using routers can reduce the need for constant contact with Mar's robotics. A polar orbiting satellite above Mars can act as an information gathering router. Data streams from the Mars rovers will be stored aboard the orbiter and later transmitted via the Ka band to any of the three earth stations.</p> <p>Using more intelligent robotics will further reduce the amount of data that needs to exchange between earth and the planet Mars.</p> <p>de Jim, K6LIO <input type="checkbox"/></p>
<p>T-Hunt Workshop</p> <p>There has been some discussion of having a T-hunting workshop. Held the day before a hunt, the participants would build a simple tape-measure antenna and learn hunting techniques. Participants will be teamed with experienced hunters for the next day's hunt.</p> <p>This will be a great chance to try your hand at hunting. Watch the web site for announcements about workshops. <input type="checkbox"/></p>		
<p>A CLASS ACT</p> <p>Every Thursday from February 10th to March 24th thirty dedicated scholars met at the Norman P. Murray Community Center for SOARA's Technician License 101 course. Volunteer instructors from SOARA guided the students through the fundamentals of amateur radio so that they could successfully pass their Technician test administered by SOARA's VE</p>	<p>Team. The students were diverse in age and background and nearly all who attended successfully passed the FCC exam. So at the next meeting welcome these new hams to SOARA and congratulate them on earning their ticket!</p> <p>With the conclusion of this class I'm proud to introduce an old friend to SOARA John Walker, AC7GK, as the new Education</p>	<p>Director. It has been a privilege to serve SOARA as Education Director for the past three years – I know John is going to do an excellent job. With that said, if you know of anyone interested in studying for their ticket or in upgrading, let John know! Thank you again to all those who taught, administered the exams, and made this class so successful!</p> <p>73-Chad, KQ6TL <input type="checkbox"/></p>



The Way I See It:

Looking at new operating modes.

Remote Base Operations Or How much more fun can you have with Amateur Radio

As a World Traveler, for business, I find myself with a great deal of spare time at airports, hotels, in cars and even at customer premises! At one time I used to take my small QRP radio with me on these trips but finally said that was enough after lugging the radio half way around the world and not even being able to talk to anyone.

Imagine my delight when Echolink came along and I could make contact with my friends back in Orange County from any where in the world, well almost. Echolink goes only a little way towards what I wanted to do: twiddle the dial to see what was "out there". I went to a lot of trouble to set up my home station so that I could connect to it remotely and link through the HROC high level repeater. I found this essential as I was spending a lot of time driving back and forth between Yucaipa and Orange County and could connect to Echolink from the car, but when I went on the road, more often than not the hotel networks blocked my access to Echolink through their firewalls. So I needed something more.

Pete Juul, W6PJ, advised me to try his remote base and directed me to look at the W4MQ software and investigate its capability. It certainly helped me work the Southern California locals on a more regular basis. I was always able to make it through the firewalls and into his remote base. A couple of clicks later I was controlling his radio and talking on the SOARA 2 meter repeater.

Once bitten by this bug I wanted to control my own station, but what was I to do? I had a bunch of radios, the FT817 that I had lugged around the world, an IC 706MKIIG that had been used for the Echolink to the HROC station, a mobile that I had purchased for the sole purpose of working Echolink on

my drive to work, and the MAIN station with 500Watts output. Far too many radios with no time to use them! So I took the plunge and spent \$60 on a piece of software by F6DEX that controls almost any radio from a computer. As I already had the interface to the FT817, I started with this to see what I could do. Sure enough after bringing up the software and setting a few parameters, I was controlling all features of the radio, or at least most, from the local shack computer.

The most exciting feature of this software is that you can then set it up as a slave and remotely access the software over the internet. What a "kick" to take my business laptop into the lounge and be a part of the family again with my shack sitting on my computer connected through the home WiFi system to the radio in the shack. With headset on and remote control of the Ft817, I was on SOARA while watching the evening news! I could even sit out in the yard and catch a few rays while tuning the bands.

So now to my first business trip and to see how it works truly remotely. I am not sure now where I was, but I can definitely say that I have worked SOARA members through my remote base from India, Israel, Brazil, UK, France and Hong Kong. All I needed was an internet connection. I have now added to this list by working Lou, KG6FCT, from an aircraft parked at the gate at Kennedy airport in NY. In a few months time I will be working you all from 36,000 ft in the air once the airlines have high speed internet on board. Will this really be Aeronautical Mobile or will it be cheating once again?

But wait, I was still not satisfied. I could not get on HF properly as I could not tune the antenna remotely. I was able to work the 40 Meter net as I would leave the tuner set to that frequency before I traveled. Plus, the FT817 did not let me work as many stations as I would like. So more recently I have increased the power and the level of control by moving over to the IC 706MKIIG and an AH4 antenna tuner. Now I have an auto antenna tuner that tunes the large sky loop at the home station as well as some more control of the radio. I can switch the attenuator on, control the preamp, even control splits etc. But I still can't control everything. To do that I would have to buy a new radio that provided full remote control.

I also would like to offer the remote base to

other SOARA members, and with the F6DEX software this is not possible. I would need to go to the W4MQ package that Pete uses and "plop" some money on the table for a TS2000. Well, the main station is now for sale so I can obtain some funds for this rig.

So technically how does this all work?

The KO6SY station consists of an IC706MKIIG connected to a computer in the shack running F6DEX software and controlling, via a data cable, the various remotely controllable aspects of the radio, the bad news is that not everything can be controlled. For instance there is no control of tone frequencies for repeater access so I have to keep all my favorite frequencies in memory and use this. The mic in and the audio out from the transceiver goes to the sound card of the computer and I use Skype software to connect to the radio, I have had some very good comments about the audio quality and ascribe this to Skype. With Skype on the shack computer it can automatically answer my call and connect me straight to the radio. I also have Echolink running in parallel so that I can listen and transmit through this medium as well, although Echolink is not fully operational as we go to press. I hope to have this up soon so that when I am not controlling the station it will revert to the high level Trabucco 440 repeater for Echolink access. The "706" is presently connected at VHF to a 13 ele Yagi beamed at Orange County but this will change as soon as I can get a dual band beam to hit the 440 machine as well. On HF the antenna is a large horizontal sky loop producing NVIS for local 40 and 80 meter performance and gain for the higher frequencies. This is tuned by the Icom AH4 automatic tuner.

Connection from a remote computer is made over the internet. I use WiFi and high speed internet in the hotels and from airports and freeways connect using the 1X Ev-DO CDMA cellular networks when available.

The KO6SY set up is simple and any one can do what I have done with most rigs.

Want to get your feet wet with this? Then download the demo version of F6DEX software. It is fully operational, but only for 30 minutes at a time until you buy a license.

Happy remoting. Malcolm, KO6SY

Year 2005	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	24	28	21	18	16	20	18	15	19	17	21	No meeting
Program	WU6D (Org. SM)	KG6UOS "Long Waves"	N6NHP "Ham Radio & Astro."	KF6POI & KJ6EO	Spring Auction	Field Day Prep.	Show & Tell	K3AW Video on Antennas	K6RIX Radio KFI	TBD	Fall Auction	—
VEC Testing	24	28	21	18	16	20	18	15	19	17	21	—
SOARA T-Hunt	9	6	6	3	1	5	10	7	11	9	6	4
Board Meeting	31	3/7	28	25	23	27	25	22	26	24	28	
ARRL Field Day						25/26						
SOARA picnic								7				
SOARA Holiday Party												4

QST QST QST

Are you thinking of joining the ARRL? Stop! Don't join directly through the ARRL. Help SOARA by joining or renewing through the club. ARRL Affiliated Clubs receive a commission for every new ARRL membership and renewal they submit to ARRL Headquarters. Clubs retain a portion of the dues for each regular or senior membership submitted through the club to ARRL Headquarters:

☞ Clubs retain **\$15 for each new membership** OR lapsed membership (of two years or more). A **NEW MEMBER** is defined as any individual who has never been a member of ARRL, or any individual who has not retained a membership for two or more calendar years prior to the application submission.

☞ Clubs retain **\$2 for each renewal**. A **RENEWING MEMBER** can renew at anytime, even before their current membership term expires.

☞ Family, Blind or 21-and-under discounted memberships are not applicable for any discount.

☞ **May not be combined with any other promotion or special offer.**

At our next meeting see me, Tony AE6QT, and I will get you set up for a win-win offer.

73, Tony Sanchez, AE6QT

A Note From the 2005 Field Day Chairman

Here I am somewhere in the Atlantic 28° 52.55' N, 75° 41.61' W. We're doing 20.2 knots at a heading of 67.7 degrees, and I'm thinking about field day. Here's the plan: I will review the needs and all the opportunities to volunteer at the May meeting. I will also have sign up sheets available starting at the May meeting. We will have another field day planning meeting June 2nd; details will follow. And, of course, we will finish our planning at the regular June meeting. We should be well organized by then. I am looking for people to help on June 24th, Friday afternoon to load a trailer with all the antennas and towers. Well, back to cruising. There's an awful lot of sun that needs soaking up.

73, KG6FCT

Repeater News

Many of you tuned into the net on April 5th and may have been overwhelmed by the courtesy tones. This is the first indication of our new radio link between the Laguna Beach 2 meter repeater and the newly acquired 447.180 MHz repeater on Santiago.

When enabled, this link enables users of the 440 repeater to interact with users on the 147.654 repeater. One of the additional courtesy tones signal that the link receiver is enabled. A second tone indicates that the link transmitter is enabled. I intend to modify the intensity of these tones as time permits.

Because the 2 meter repeater is so busy, for the time being, the link will be enabled only for the net and other special events. After we get comfortable with its operation, the Board may chose to make it a user invoked function. The Board decided to implement this new capability in order that our recently merged HROC members can participate in the Tuesday net.

Please welcome our new members and tell them about this capability."

Howard, KG6GI, Repeater Director

The PROPAGATOR



South Orange Amateur Radio Association
P.O. Box 2545
Mission Viejo, CA 92690

Meeting: April 18, 2005 at 7:00 PM SKYWARN

☛ **SOARA** meets at the Mission Viejo Community Center, 26932 Veterans Way, Mission Viejo, the third Monday of every month at 7:00 PM. Changes to the meeting time or place are announced in this newsletter and on the 147.645 two-meter repeater.

☛ **License Exams:** Amateur License Exams are given prior to SOARA meetings. Exams are from 5:00 to 7:00 PM. Walk-in applicants are welcome. For information call Paul Levey, NZ1M, at 949-481-5454.

☛ **Contacting SOARA:** Questions about SOARA? Send e-mail to: 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
220 — 224.100 – (110.9) Laguna Beach
220 — 224.640 – (123.0) Santiago Pk. (C) 440 —
445.660 – (110.9) Laguna Beach
440 — 447.180 – (131.8) Santiago Pk. (C)

☛ **Nets:** SOARA 2 m repeater open net is held Tuesday 8:00 PM
40 meter HF net (7.250 MHz +/- for QRM), Sunday 7:30 AM.

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