



THE

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The Monthly Newsletter of the South Orange Amateur Radio Association

December 2011

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No Meeting in December



As a reminder, there is no SOARA meeting this month.

SOARA's next meeting will be on the 4th week of January (1/23/12) as the 3rd Monday of January is a holiday (Martin Luther King Day).

For the January meeting we will be playing a ham radio version of Jeopardy.

SOARA wishes all its members and family members the best for the Holiday Season and a Happy New Year!



The Year in Review - AD6OI

As we get ready to bid goodbye to another year I would like to reflect a little. We (SOARA) have had a good year with many interesting adventures. Our emergency groups are doing well, Mission Viejo is still being guided by Charley WA6RUZ, Tri-cities has Joe W6BGR to guide it, Laguna Niguel is undergoing some changes but last I heard Ray KJ6OAX was still in charge. Other cities are looking at starting similar groups (Laguna Hills for one) and we hope to be able to report more in the future. In the canyons Dave KG6QCI is working with commercial as well as ham radio to support his constituency. I have been busy with special events primarily races such as the Laguna Hills half-marathon and various off road runs and bike rides. Effective in May I replaced our raffle director Hal WB6WXO as the education director and have been busy working with that. Together with Mark KI6SHD and Ryan KI6SHE we had a weekend Boy scout

merit badge and amateur technician class and were reasonably successful. We are planning a General upgrade class early in the year, if anyone is interested please get in touch with me. Mikkel NR6E is still looking for one more person to do the weekly net so please give him a call if you are interested. The club is also looking for an Activities director if interested please get in touch with Tom AE6SH or Timothy AF6GL. This is only a partial recap so if I missed something I hope someone else might mention it. So as we go into 2012 lets remember to be thankful for what we have and promise ourselves that we will become more active in all the things that we enjoy.

73

Heiko
AD6OI
Ambassador
Education Director
Sgt. at Arms

No
Meeting
This month

(Next
Meeting:

January
23rd, 2012)



2012 ARRL
Yuma Hamfest
February 17-18

VE FCC Exams

Next session:
January 23rd
before the
meeting.
Contact Mike
[NM6X](#) for info.

Walk-ins ok.
Extra || General ||
Technician &
CW Exam, too!

Holiday Party

Thanks to all who joined us at the annual SOARA Holiday Party! Mack, KD6KSP, was the winner of the Richard Coyne, WW7D, Ham of the Year award for outstanding service to ham radio. (presented by Tom, AE6SH) Thanks, Mack, especially for your tireless work on the OC Fair and for playing the part of QRN for the Wouff-Hong ceremony at Hamcon. Congratulations, Mack!



Bob, W6CIC, pictured at the right, with Mike K6MSM, was the proud winner of the door prize, a Yaesu VX-8DR.



ALC - Friend or Foe?

A Tech Note:
By K6RBS

ALC is the abbreviation for Automatic Level (or Load) Control and the first time most hams are confronted with the term is when they get their first HF rig. Their radio usually contains three meter settings for transmit showing: **Power, SWR** and **ALC**. If the ham has owned a VHF radio they may (or may not) understand the power and the SWR readings. ALC is less widely understood and, unfortunately, often ignored.

Since the carrier is suppressed on SSB, unlike FM, the power of an SSB transmission varies as you talk. The power output meter indicates approximately the average power that you are putting out. It often does a poor job since it is unable to track the rapid level changes of the human voice. As a result, the power meter will only show maximum output when you transmit a constant tone or carrier. For the rest of the time it will bounce around showing an average that is usually around 35 watts or lower for a 100 watt transmitter.

It is the job of the ALC circuit to reduce the gain of the transmitter on speech peaks to prevent it transmitting more power than it is designed for. The ALC meter is actually showing a negative voltage that is being

applied to reduce the overall gain of the transmitter. Each model of transceiver has different ALC characteristics that include things like: how quickly does it cut back the gain (the attack); how slowly does it return the transmitter gain to normal once the loud voice peak finishes (the decay); and at what power level does the ALC start to cut back the gain. Most ALC circuits have a relatively rapid attack and a slow decay. The gain may start to drop at power levels as low as 50 watts. While the ALC circuit in some older tube radios sometimes allowed for a little headroom, e.g. 120 watts, the upper limit of 100 watts in modern radios seems to be a „brick wall“ that cannot be exceeded.

Friend: When talking normally on SSB, a little ALC indication can be considered a good thing – it shows that you’re getting close to the rated output of the transmitter. Since different radios have different ALC characteristics, it is best to consult the manual for the correct settings but most radios have meters that have a stripe on the meter showing the acceptable ALC range. Watch the ALC rather than the power out meter when transmitting. Keep your mic gain set so that the ALC stays in the lower 50 % of the range for most of the time with occasional peaks into the top half of the range and your audio (and signal width) should be acceptable. If your mic gain is so high that you exceed the ALC range, your signal will be distorted, wider and more difficult to copy.

Continued on page 3...



Check out Ham Nation on TWiT.tv:

<http://twit.tv/hn>

K7RA Solar Update

Solar activity dropped this week, with average daily sunspot numbers declining over 39 points to 94.7.

It's been 13 weeks since the average daily sunspot number for the week was that low or lower, when Propagation Forecast Bulletin ARLP037 reported an average of 91.7. The daily sunspot number has been lower than this week's average starting December 12, when it was 70, and has since been 77, 65 and 44 through December 15.

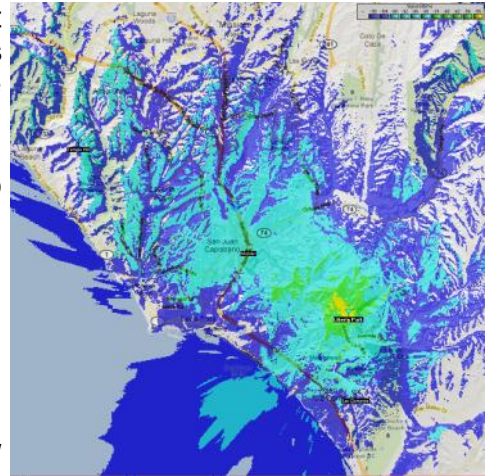
T-Hunt Report

Thanks to all the hunters that decided to come out on a cool Sunday afternoon (12/4). The T was hidden in Liberty Park (San Clemente) by Mike (K6MSM) and Esthela (no call).

It was a small group for December, perhaps due to the cold weather... There were 3 teams hunting:

Sean (AJ6B) & Michie (KD6CAT)
Gray (WA6BJY)
Richard (K6RBS) & Don (KE6BXT)

The T was a 3 element Yagi, vertically polarized, driven by an HT at about 3.5W (measured, 5W



(...continued from page 2) **ALC - Friend or Foe?**

Foe: The rules for PSK are different than with regular voice SSB. Since many PSK users occupy the same narrow segment of the bands, the PSK signals must be as narrow as possible. ALC action makes the transmitter non linear and therefore, by definition, causes distortion and increased signal width. While a little distortion is acceptable on SSB, it is NOT on PSK. The best way to configure your radio for PSK is to avoid using ALC: Set the power control (or menu) on the radio to MAX – yes MAX (usually 100 watts).

Adjust the mic/data input gain on the radio along with the sound card output slider on the computer to the point where there is a small amount of ALC indicated on the radio.

Reduce the sound card output or mic/data input gain slightly until there is no longer ANY ALC indicated on the radio. Once set, any increase in audio from the computer to the radio or reduction in the radio's POWER setting will cause ALC action or distortion.

PSK is very efficient in terms of the signal to noise ratio that can be achieved at the receive end compared to the originating transmitter power. Most people run around 25 watts. The technique above will result in a transmit power in the 20 – 45 watt range for most modern HF rigs.

nominal). Above is the “predicted” pattern and below is a picture of the group.



Actual results varied, especially when the hunters got close, each of them going down a dirt path, when a nice paved path was also available. The fact that the beam was pointed at a hill probably made the reflections “fun”.

Thanks again to all who joined in the hunt!

Sean, being the first to stumble across the T, gets to hide it next month (date TBD, since the 1st Sunday is New Year's Day, 1/1).

73, de Mike K6MSM



**From the
Membership
Directors:**

We send our happy
"ham" holiday
wishes to all 230
members!!

Horst Zitz-
mann, KD7JHR
&
Marie Zitzmann,
KD7JHS

Membership
Directors, SOARA

Beacon and QSL Report

By Hal Silverman WB6WXO
SOARA QSL Manager

Now that 10M is heating, SOARA has begun to get K6LLL beacon reports. We have seen reports from far away as the Czech Republic. We have also received QSL requests from hams that worked the club during Field Day.

K6LLL (28.2035) Beacon Contacts:

Call Sign	Name	QTH	Date
OK1NF	Jan K.	Czech Republic	October 26, 2011
SWL Veron NL 13562	Ruud V.	Utrecht, Holland	October 22, 2011
WD8OSE	Thomas H.	Stephenson, MI	October 9, 2011
KB3MXM	Marty	Baltimore, MD	September 4, 2011

Field Day Contacts Requesting & Receiving QSL Cards:

Call Sign	Name	QTH	Date
WD6DOE	Gary G.	Anaheim, CA	June 25, 2011
KJ4ZZV	Michael G.	Cookeville, TN	June 26, 2011
KE6VUS	Scott P.	Paradise, CA	June 25, 2011
KD5NWS	Charles O.	Luther, OK	June 25, 2011

Raffle Report

The monthly raffle will start up again with the January general meeting.

I have put together more ham radio prizes than we have had in the past few months.

I have been able to purchase from HRO a 2011 ARRL Handbook and a 2011 ARRL Antenna Compendium. One of each will be offered in January and February.

In addition, I have a MFJ set of headphones and speaker for both January and February.

That will make up the bulk of the \$1 raffle prizes. As of this writing, I am not sure what the \$5 raffle prize will be.

Right now, I am leaning toward a Yaesu VX-8DR. This hand-held radio covers 6M, 2M, 1.5W on 220MHz and 440MHz.

Another consideration is the VX-8GR. That is a dual band hand-held that has GPS built into the radio. It also has a wide band receiver that covers 108-999 MHz (Cell phone frequencies are blocked)

If there are any comments, please contact me at WB6WXO@SOARA.org

Year 2011	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	24	28	21	18	16	20	18			17 Dues	21	—
Program	It's Your Club AF6GL	Rally KI6IUC	Contest Fun AF6GL	D-STAR NJ6N & KG6GI	Spring Auction	Field Day Prep				T.tv	Fall Auction	—
VEC Testing	24	28	21	18	14						21	—
SOARA Saturdays			Mar. 5	26								—
SOARA T-Hunt	2									2	6	4
Board Meeting	31	Mar								24	28	19
Special Events								Picnic		9-11 SW Div Hamcon		3 Holiday Party
ARRL Field Day												
SOARA Picnic								7				
Holiday Party												3

Thanks to all for participating in the great activities in 2011! Please check back next month for the 2012 calendar of events!

☛ **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 encouraged, but walk-in applicants are welcome. For information, call Mike Slygh, NM6X, at 949-305-1374.

☛ **Contacting SOARA:** Questions about SOARA? Postal mail: P.O. Box 2545, Mission Viejo, CA 92690. 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
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 (.180, .645 & .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.

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