

THE

PROPAGATOR

The Monthly Newsletter of the South Orange Amateur Radio Association

January 2013

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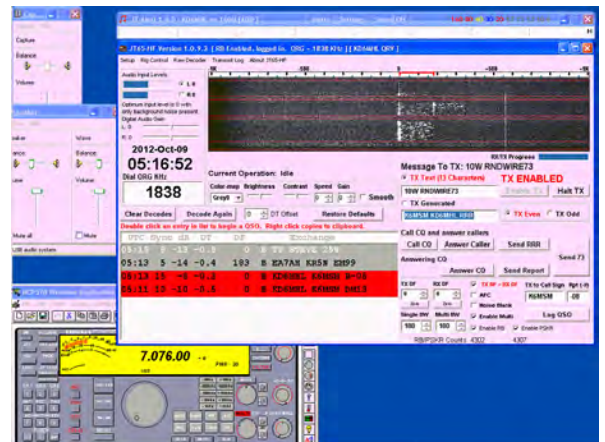
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Computers & Amateur Radio

Please join us for our first meeting of the year as we kick off 2013 with a very informative presentation. Malcolm Levy, KO6SY, will be showing us the wonders of amateur radio and computers. If you think that just because you can't hear 'em you can't work 'em, think again! Digital radio modes can work some amazing feats, frequently with signals that are inaudible to the human ear. Here are the topics which will be covered.

If you have been thinking about hooking up your computer to your radio or even if you have worked a few modes, be sure not to miss this presentation!

- Basic computer to radio control
- New Modes decoded by computers
- HDTV
- DRM
- JT65
- Software Defined Radios (SDR):
 How they work
- The power of the computer
- Professional Systems



Meeting

Jan 28th,
2013

7:00 PM
N.P.
Murray
Center
Veterans
Way
Mission Viejo

Looking Back de NR6E

It's been nearly 2 years since I stepped in to the role as communications director for SOARA. Thus, my term is coming to an end and now is a good time to look back and reflect on the past 2 years and what worked and what didn't work.

Being part of SOARA has been a truly great experience and I fully expect that to continue as I continue to be a member of SOARA for years to come, but I am not going to run for re-election as communications director. Things change, life changes, and it's time for me to put more time and energy elsewhere.

In the past 2 years we for the first time got SOARA on Facebook and it appears that our presence there works well and attracts attention to the club and to our activities. We also continued to run our weekly nets on Tuesday nights with a couple of our members acting as net control on a rotating schedule. I'd like to take this opportunity to thank Sean AJ6B, Spencer NG6K, Heiko AD6OI and Norm KJ6SON for being part of the net control team. You have been exemplary by your reliability and willingness to step up and be part of making SOARA an active club.

During my tenure we also made an attempt at a weekly D-star net, but this net never became the success we had hoped. D-Star still seems to be a technology and topic that polarizes HAM's: Some love it and some don't.

Continued on page 2...



**Desert Rats
Rendezvous**
Jan 25-27

**SOARA
Saturdays**
Feb 2

Yuma Hamfest
Feb 15-16

ARRL Field Day
Jun 22-23

VEC License Exams

Next session:
(6:00pm), be-
fore the General
Meeting
Contact Sean
[AJ6B](#) for info.

Walk-ins ok.

Extra | General |
Technician
Exams

Continued from page 1...

Lately, we have also made good progress in supporting various local emcom groups such as Orange County Parks' Firewatch. –This is a cause that is particularly near and dear to my heart because the OC Firewatch program is a well-run volunteer program where we have a real opportunity to make a difference.

I have decided to not run for re-election to allow someone with new, fresh, ideas to get the chance to make a difference and this leads me to the last point I'd like to make:

Clubs like SOARA don't happen automatically and things don't run themselves. In order for SOARA to be a viable, active club with activities that are of value to the membership, we **all** need to step up and do our part in helping make this happen. The job as communications director will become vacant in the next few months and SOARA needs someone to step up and take on the challenge of continuing to keep the weekly net running, liaise with local emcom groups and coordinate special event usage of our repeaters. It's a fun job and I highly recommend it to anyone who's been looking for a way to help SOARA.

73, de Mikkel Hansen NR6E

SOARA Saturdays

Please join us at the Norman P. Murray at 9am on Saturday, February 2nd for our first SOARA Saturday of the year. Following the discussion by Malcolm Levy, KO6SY, we will continue with a practical hands-on demonstration and training of HF digital modes. Elmers and new comers are encouraged to participate!

2013 Field Day is June 22-23

Field Day is always the fourth full weekend in June. June 2013 has five weekends in it, so make sure you have the correct date! Field Day 2013 will be the weekend of June 22-23. Save the date now as it will be here before you know it!

From Desert Rats:

You are invited to attend Rendezvous 2013

Due to the fact that we have had to cancel the Palm Springs Hamfest for 2013. We are going to have a get together at:

Lake Cahuilla in La Quinta, CA.

If you are in the area please come by and visit us. [January 25, 26 & 27th]

For more information about Lake Cahuilla Park and what is available please see their web site:

[Lake Cahuilla Parks Website.](#)

Please visit the [Desert RATS web site](#) or the new [Palm Springs Hamfest website](#) for more information and directions to the park. We will be in the Group Camping area on the South West side of the park.

Thank you



From Membership

Soara has 141 paid up members and 83 who have not yet renewed their membership.

We'd like to remind those who have forgotten or postponed renewing that it's time to send your check, use

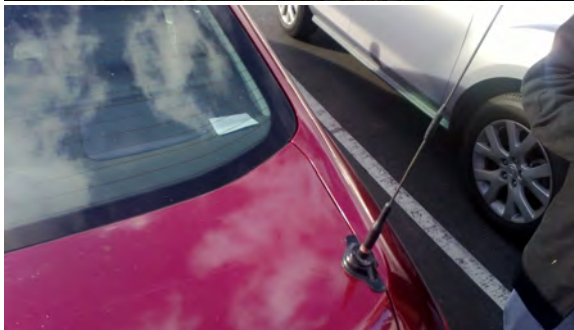
PayPal on the website or bring your dues to the meeting on Monday, the 28th.

Happy new year, from Horst and Marie.

Horst Zitzmann,
KD7JHR
Marie Zitzmann,
KD7JHS

[2012 Marks All-Time High for Amateur Radio Licenses](#)

SOARA T-Hunt



January 6th, was a fine day for a pleasant and easy T-Hunt, with Richard K6RBS and Mike NM6X hiding the T this month. It was almost too close as we (Sean, AJ6B & Mike K6MSM) ended up driving past the T and were incredulous that the signal was behind us after only going a couple miles (if that). We drove around and around and came to the only logical conclusion, the T was in a Laguna Niguel CostCo! Even then, it took a while to find the T which was on a car.

Yuma Hamfest

This event is just [one month] away, held Friday and Saturday, February 15-16, 2013 at the Yuma County Fairgrounds in Yuma, Arizona...

Now in our ninth year and one of the largest hamfests in the ARRL's Southwestern Division, the Yuma Hamfest is one of the few multi-day convention-style hamfests held in Arizona. We feature commercial exhibitors and vendors, tailgating, on-site RV camping, free parking, seminars held in parallel tracks in two separate buildings, amateur license testing, DXCC card checking, an antenna clinic & transmitter hunt, our famous "Buzzard BBQ" dinner, grand prizes worth well over \$10,000, great hourly door prizes, a hospitality area, the "Country Store" consignment sales area, and much more.

Admission is only \$5, tailgating spots are \$10 for the weekend, and we offer a food concession run by a professional chef. Our now-famous "Buzzard BBQ" dinner is only \$10 and has sold out for the last three years. We are giving away a Samsung Note 10.1 tablet as an admission registration prize to someone just for attending. You should mark the third weekend of February on your calendar and plan on attending the Yuma Hamfest.

Please check our website at www.yumahamfest.org for more information. If you prefer, you can contact us directly at info@yumahamfest.org or by phone at 928-305-1034. We are also taking proposals for seminars at this time, and welcome volunteers to assist us in putting on the hamfest.

Roger Hunt, K7MEX
Director, Yuma Hamfest



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Happy new year,
from
Horst and Marie

Horst Zitzmann,
KD7JHR
Marie Zitzmann,
KD7JHS

Did You Know?
[Historical 'Facts'](#)
[That Are Not True](#)

Spencer's (NG6K) Eagle Project

Here are some pictures from Spencer's very successful Eagle Scout Project on 12/15/12. We got very lucky to have such clear weather (though still rather cold), when the days before and after this were quite rainy. Thank you to all who helped. As a result of this project, the Temple Hill repeater site is looking very spiffy. It took 3+ layers of paint on the sides to get it looking this good. The wood was soaking up the paint like you can't believe! Thank goodness we had enough paint to complete the project!





Propagation de K7RA

Average daily sunspot numbers over the past week were less than half the value for the previous week, dropping nearly 73 points to 56.4. Average daily solar flux declined as well, nearly 47 points to 110.7. Average geomagnetic indices were up about 50%, but still very quiet. The higher average was due to events on January 17, when the planetary A index was 13, higher than recent measures, but still moderate. The cause of the mild disturbance was the arrival of a CME, or Coronal Mass Ejection.

<http://www.arrl.org/w1aw-bulletins-archive/>

HF News CQ DX CQ DX...

Notable Contests/Events

- CQ 160 meter CW (Jan 26-27)
- REF Contest CW (Jan 26-27)
- SPAR Winter Field Day (Jan 26-27)
- 10-10 Int. Winter Contest SSB (Feb 2-3)
- EPC WW DX Contest (Feb 2-3)

Selected DXPeditions

- Senegal, 6W/F6IRS, until 2/7
- Ghana, 9G5MS, until May
- Thailand, HS0ZJF/8, until 2/18
- Antarctica, VK0JJJ, until 1/2014

<http://www.swpc.noaa.gov/SWN/index.html>

[2013] Propagation de K7RA

The New Year brings dreams of solar cycles of old, so distant now, sweetly remembered for their profusion of sunspots. We hear many times from operators who began in the amateur radio service as teenagers at the peak of Cycle 19. With youthful optimism, they naturally assumed that radio propagation would always be like that, when a few watts and a modest radiator on 10 meters spanned the globe during all the days and nights.

If you were age 13 to 17 in 1957 to 1959, the peak of Cycle 19, perhaps you were born between 1941 and 1945, and probably looked forward to the next peak in activity. That may have been a disappointment when Cycle 20 peaked around 1969, as that had a somewhat broader peak but at a far lower level. You can see it graphically at <http://wm7d.net/hamradio/solar/historical.shtml>. These young adults, now 24 to 28 years old in 1969, might be busy starting families and careers, and no doubt fondly recalling simpler times and the tremendous propagation of their younger years.

Cycle 21 peaked around 1980, and the former teenaged ham of Cycle 19 was now 35 to 39 years old. This was quite an improvement over the last cycle, as was Cycle 22, which looked like an echo of Cycle 21.

Cycle 22 peaked around 1991-1992, with a more pronounced double-peak. The former teenager was now 47 to 51 years old, solidly into middle-age, and still wondering if sunspot activity would ever roar back to the levels of the late-1950s.

The following cycle, number 23, was another double-peak, but significantly lower in 2000 to 2002 than the previous cycle. Perhaps another disappointment for the now 56 to 60 year old ham, who then sees solar activity slide into a long and low minimum over the next decade, impossible to imagine 60 years earlier. The 160 meter operators, quite happy in this situation with a much quieter Sun, have no such longing for the active Sun of yesteryear.

Now the young ham of the late 1950s contemplates the peak of Cycle 24, apparently much lower than any seen in most of the past century, and expected to grow to maximum this year. Now we have many more tools to observe and measure both solar activity and propagation, and we know that activity could still increase significantly. Some foresee decades of lower activity, but of course predicting future solar activity is a very tricky proposition, and anything could happen.

At http://www.solen.info/solar/images/comparison_recent_cycles.png you can see a comparison of recent cycles, from 21 to the current 24.

While we've seen a number of papers and predictions for a series of quieter sunspot cycles, some disagree. For instance, Michael Proctor, professor of Astrophysical Fluid Dynamics at

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Cambridge University is not convinced. He was quoted this year as saying, "This present cycle is similar to the weak one that ended in 1913, and that was followed by a strong cycle."

Those were Cycles 14 and 15, and Cycle 15 was only strong relative to 14. Cycles 17, 18 and 19 were stronger than 15, and so were 21, 22 and 23.

It is also important to remember there is wild variability in solar activity. To make those graphs of sunspot numbers appear smooth, each point on the graph actually represents an average of a year of data. When averaged, the flurry of solar activity at the end of 2011 and some future activity in 2013 could appear as a broad peak on a graph.

NASA looks frequently at their predictions for the current cycle, and often adjusts them every month. The latest shows a smoothed sunspot number a bit lower than the forecast from several weeks ago.

In the December 10 forecast they predicted a smoothed sunspot number of 72 in the late in 2013, but that number is now 69 in the January 2 release. Note these are the lower international sunspot numbers, which are always less than Boulder numbers presented in this bulletin. Read the report at <http://solarscience.msfc.nasa.gov/predict.shtml>.

With the change from 2012 to 2013, now is a good time to review sunspot numbers and trends. Average daily sunspot numbers in 2013 were up substantially from 2012. From 2004 through 2012 the yearly progression was 68.6, 48.9, 26.1, 12.8, 4.7, 5.1, 25.5, 29.9 and 82.3. I took all the daily sunspot numbers for 2012, added them together, and the sum was 30,133. Divide that by 366 (the number of days in 2012, a leap year) and the result is approximately 82.3. In 2011 it was 10,913 divided by 365, yielding 29.9.

The 2012 average was higher than any year after 2003. But at the peak of Cycle 23, the averages from 1998 to 2003 were all higher:

88.7, 136.3, 173, 170.3, 176.7, and 109.2. It seems unlikely that average daily sunspot numbers this year will reach anywhere near the level of 2000-2002.

We observe a moving 3-month average of sunspot numbers, in an attempt to smooth out some of the variations. Unfortunately, the past three months were much lower than the three month period ending one month earlier. The current average of 74.4, centered on November 2012, is lower than any three month period since averages centered on February and March of 2012.

The 3 month period previous to the current one is centered on October 2012, and covers September through November. The average then was 82.3. To recap averages from previous bulletins, the three-month moving averages of daily sunspot numbers centered on July 2011 through November 2012 were 63, 79.6, 98.6, 118.8, 118.6, 110, 83.3, 73.7, 71.2, 87.3, 91.5, 96.5, 91.9, 89.9, 81.2, 82.3, and 74.4.

If you would like to make a comment or have a tip for our readers, email the author at k7ra@arrl.net. For more information concerning radio propagation, see the ARRL Technical Information Service web page at <http://arrl.org/propagation-of-rf-signals>. For an explanation of the numbers used in this bulletin, see <http://arrl.org/the-sun-the-earth-the-ionosphere>. An archive of past propagation bulletins is at <http://arrl.org/w1aw-bulletins-archive-propagation>. Find more good information and tutorials on propagation at: <http://myplace.frontier.com/~k9la/>.

Monthly propagation charts between four USA regions and twelve overseas locations are at: <http://arrl.org/propagation>.

Instructions for starting or ending email distribution of ARRL bulletins are at <http://arrl.org/bulletins>.

Year 2013	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	Digital Radio				Spring Auction	Field Day Prep		SOARA Fair			Fall Auction	—
VEC Testing	28	25	18	15	20	Field Day	15	19	16	21	18	—
SOARA Saturdays (9am)	Feb 2	Mar 2	23	20	25	—	20	24	21	26	23	—
SOARA T-Hunt	6	3	3	7	5	2	7	4	1	6	3	1
Board Meeting	Feb 4	Mar 4	25	22	Jun 3	24	22	26	23	28	25	—
Special Events		Yuma 15-16			Dayton	Field Day		Picnic				Holiday Party 1
ARRL Field Day						22-23						
SOARA Picnic								4				
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 at 6pm.** Prior registration is not required and walk-in applicants are welcome. 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, 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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