SCCARA-GRAM

Santa Clara County
Amateur Radio Association

Volume 34, Number 5 May 2018

President's Prose

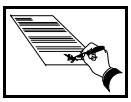
I would like to thank everyone that helped with the Electronics Flea Market that SCCARA sponsored at Fry's Sunnyvale. Fry's was pleased with the the outcome of this trial arrangement and has offered to let future Electronic Flea Markets also use their parking lot. Thank you Ed WB6IQN for negotiating this opportunity.

Preparations started with Lou WA6QYS and Svend KF6EMB renting a trailer and loading it up with supplies on Friday. Svend showed up with the trailer at 5 A.M. so that set up of the tent could begin and the coffee started, and Lou showed up minutes later with a van full of donuts and soda.

Paul KK6HWN and Seth KF6UZX showed up at 3 A.M. to work the gate and mark the parking stalls for vendors. Goetz was there by 4 A.M. with his generator and ready to help set up the Food Tent. He was joined by Rusty KI6ZSK, Gary WB6YRU, Janet KF6PUQ, Praveen KK6VGB, Lloyd KD6FJI, Rich W9BAR, Dave K6WA, and Mike KN6QI. John W6JPP showed up at De Anza to redirect vendors to Fry's. The vendors started pouring in and came close to filling every space and every donut was sold. The sodas left over will show up at Field Day. Thanks again to everyone that helped.

Field Day 2018 will be on June 23-24 this year. SCCARA will be participating by operating from the Club Station at the Red Cross. George Williams N6NKT (who is our ARC contact) has given permission to upgrade the HF antennas on the roof of the Red Cross. If you are interested in volunteering to help with an antenna party, contact Gregg KF6FNA to get ;more information. There will be an update on Field Day at the May 14, 2018 Meeting, and Field Day will be the main program for the June 11 Meeting. Hope to see you at the Meetings!

73, Gregg KF6FNA, kf6fna@comcast.net



EchoLink

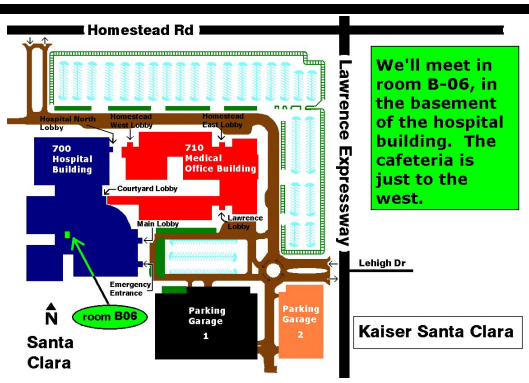
I encourage people to leave their 2 meter repeater transceivers on and monitor the club W6UU repeater frequency 146.985. Now that we have EchoLink working to perfection, people drop in from just about anywhere. When they check in, the PC that handles the internet/repeater link announces their connection by clearly stating their call sign. Then there is an

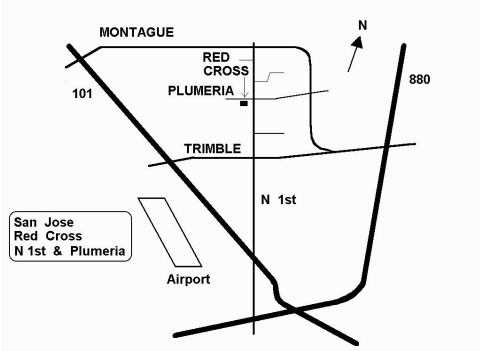
Calendar

5/14 **SCCARA General Meeting**
5/21 **SCCARA Board Meeting**--(San Jose Red Cross, 7:30p, all are welcome)

General Meeting

Day: Monday, May 14, 2018
Time: 7:30 PM
Place: Kaiser Santa Clara, Hospital B-06
Featuring: *{to be announced}*





The ***SCCARA-GRAM*** is published monthly by the **SANTA CLARA COUNTY AMATEUR RADIO ASSOCIATION**, PO Box 106, San Jose CA 95103-0106.

SCCARA was formed in 1921 and became a non-profit corporation in 1947. SCCARA is an affiliate of the American Radio Relay League (ARRL). The club station is W6UW.

The deadline for articles is the **last Monday of the month**.

Web page: www.qsl.net/sccara

BOARD OF DIRECTORS
(officers are also directors)

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	e-mail:, ka6ymd@arrl.net)	

SCCARA REPEATERS

SCCARA owns and operates two repeaters under the call W6UU:

2 meter:	146.985 - PL 114.8
70 cm:	442.425 + PL 107.2

Phone auto-dial and auto-patch is available. The two meter repeater is located at Eagle Rock near Alum Rock Park in the foothills of east San Jose. The 70 cm repeater is located at the Regional Medical Center (formerly Alexian), east of downtown San Jose, north of 280 and 101.

SCCARA NETS

On our two meter repeater: Mondays at 7:30 PM, (not the second Monday--our meeting night). Coordinator: Don Village, K6PBQ. On ten meters, 28.385 MHz USB, Thursdays at 8:00 PM. Net control: Wally Britten, KA6YMD. Visitors welcome.

N0ARY PACKET BBS

SCCARA hosts the packet BBS N0ARY (connect to n0ary-1). User ports: 145.09 MHz at 1200 baud, 433.37 MHz at 9600 baud, and telnet sun.n0ary.org (login "bbs"). Sysop: Gary Mitchell, WB6YRU For general packet info, see the NCPA web site ncpa.n0ary.org.

AMATEUR LICENSE TESTING

ARRL/VEC Silicon Valley VE group:
Morris Jones, AD6ZH: 408-507-4698

awkward silence, as those checking in are often doing it for the first time. This is when we need club members to step up to the plate and initiate the conversation.

It does not matter that you don't have the call sign correctly, simply respond to the EchoLink connection, there is plenty of time to nail down the call sign once a two way conversation has begun. If you can't get a response, then announce to the unknown party that they are not transmitting audio. This is a common problem as their device may not be properly configured. They will almost always be hearing you, so to help things along, you might suggest that they use the EchoLink "TEST" feature which will allow them to ping the EchoLink website and get a confirmation of their transmitted signal.

I mention all this because this morning I heard the PC announce "OE1HLB CONNECTED". I did not get the call sign correctly, but responded "ECHOLINK CONNECTION THIS IS K6GKB". After both of us corrected our call signs I learned that I was talking to Hans from Vienna who happened to be in a hotel in Budapest with his family. He had never used EchoLink before and wasn't this just the neatest thing! When I told him I was in San Jose, he said he had spent plenty of time hear in our Silicon Valley working for various companies to include Hewlett Packard. Was holed up in Santana Row no less. Just amazing how these things play out.

The beauty of all this is that for many of our club members who cannot put up a working HF station, here is a window to the world using nothing more than a hand held or even a PC or smart phone.

Goetz Brandt, K6GKB

The Post Office

As the treasurer of SCCARA, I have the duty to regularly go to the down town post office at St. John & 1st street and empty out the contents of BOX 106. Much like our home mail boxes, the content is mostly junk or misaddressed mail. The ritual is to obtain one of the short term parking places out front, put my quarter in the meter and get a whopping seven minutes to retrieve the mail.

The point of this missive is the wonderment with which I enter this building. Built in 1934 as a WPA project, it is a testament to who we once were as a nation. The outside facade is beige terra-cotta, each tile or ornamented relief was molded from clay, fired in a kiln and brought to a brilliance with glazed enamel that just amazes. Once inside the building, from floor to ceiling, everything is artwork that defies imagination. The carved wooden ceiling, the inlaid marble floor, the use of bronze ornamentation everywhere is simply beyond our present ability. The walls of brass mail boxes with the old Schlage locks are now obsolete, stamped aluminum being the more cost affective solution.

I recommend a visit to this museum before our city planners decide the building is a waste of valuable real estate and it is leveled to make room for a building drafted with a straight edge and maximized for return on investment.

Goetz Brandt, K6GKB

ARRL News

From *The ARRL Letter*, April 5, 2018

Apparent First 2200-Meter Transatlantic Contact by US Radio Amateur Reported

In late March, Paul Kelley, N1BUG, of Milo, Maine, completed what may have been the first transatlantic 2200-meter contact by a US radio amateur under Amateur Radio rules. Signals in this part of the spectrum and lower previously have spanned the Atlantic in one direction, and Canadian radio amateurs have reported transatlantic contacts on the band dating back several years.

"To the best of my knowledge this is the first transatlantic two-way QSO from the US on 2200 meters under Part 97 operation," said Kelley, who told ARRL that he gravitates toward the more challenging, "weak-signal" aspects of Amateur Radio and has been experimenting and DXing for 37 years now.

"2200 meters is my new passion, and I am having a lot of fun with it!" he said. "I had been dreaming of -- and working toward -- a transatlantic QSO on 2200 meters for some time. Recently, I asked Chris Wilson, 2E0ILY, if he would be interested in trying to work me on DFCW60 mode. Chris and I have heard each other on WSPR, but he does not hear me well enough yet for a JT9 or other digital QSO. Chris agreed to try DFCW60 -- dual-frequency CW, 60-second dit length."

This was not a quick contact. It took four nights to complete, using night-by-night sequencing. Kelley called that "the minimum possible time" for such a contact, which included an exchange of complete call signs, signal reports, and acknowledgments. Kelley said they used the TMOR reporting system, borrowed from the moon bounce world.

"The QSO was completed at 0020 UTC March 28, when I received 'R' from Chris," Kelley said.

From *The ARRL Letter*, April 12, 2018

More-Frequent Spotless Days Signal Start of Lengthy, Deep Solar Minimum Phase

The sunspot numbers have not been good, and it does not seem they'll be getting much better anytime soon. According to the April 12 "K7RA Solar Update," no sunspots were seen over the April 5 - 11 reporting week. Solar flux has been sitting in the 60s lately and is forecast to remain at that level for the next 45 days. We're not at solar minimum yet, though; better days lie ahead -- eventually.

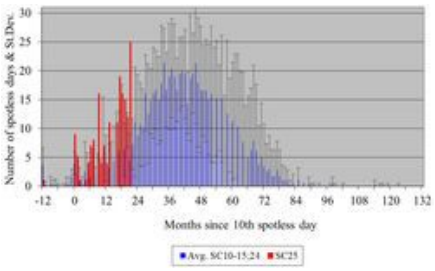
Top contester Frank Donovan, W3LPL, asserts that solar precursors like spotless days, which correlate physical solar phenomena with future solar activity levels, are much better indicators of progress toward a solar minimum -- a broad phase of the solar cycle -- than of a specific event, such as the bottom of a broad solar minimum. Not only that, these and other solar precursors are useful in predicting the likely strength of Solar Cycle 25, although accurate predictions of the strength and time frame of the Cycle 25 solar maximum aren't possible until the new sunspot cycle is under way.

"We entered the Cycle 24 solar minimum with the onset of 8 spotless days in June 2016," Donovan pointed out. "We had only 32 spotless days in 2016. We had 15 spotless days in a row in March 2017, followed by relatively infrequent spotless days for the next 7 months."

The frequency of spotless days accelerated in early November 2017, with 13 spotless days in a row. That was followed by many more spotless days over the next 5 months. In all, 2017 experienced 104 spotless days.

"The frequency of spotless days accelerated again last month, when we had 25 spotless days," Donovan noted. "We've already had 54 spotless days during the first quarter of 2018. This data and comparisons to frequent spotless days during the last solar minimum suggests that we may have just begun a period of very frequent spotless days for approximately the next 2 years, similar to the period of September 2007 through January 2009."

Donovan said the next solar precursor is frequent extended periods of spotless days. For example, 2016 saw 14 spotless days in a row, March 2017 had 15, November 2017 saw 13, and early March experienced 14.



This chart shows the number of spotless days -- in red -- since the 10th spotless day of the onset of solar minimum in July 2016. In blue are the average numbers of spotless days during sunspot minimums following weak sunspot cycles similar to Solar Cycle 24.

"Long periods of spotless days will become even more frequent as we go deeper into solar minimum," Donovan predicted. Once extended periods of spotless days become more frequent, another solar precursor will become important, he said.

"New high-latitude opposite-polarity Cycle 25 sunspots will then begin to appear more frequently, perhaps by late next year," Donovan said. "More frequent Cycle 25 sunspots will signal that we're approaching the bottom of the [Cycle 24] solar minimum phase."

An ongoing solar precursor that could herald the future strength of Cycle 25 is the intensity of the solar polar magnetic fields prior to the Cycle 24 solar minimum, Donovan said. "The good news is that the solar polar magnetic field strength is already slightly stronger than it was prior to the last solar minimum," he said. "This suggests that Cycle 25 will be somewhat stronger than Cycle 24."

Donovan said if the long periods of spotless days end in about 1 year, that will be a precursor of a stronger Cycle 25. If they take more than 2 years to end, however, it will portend a weaker Cycle 25.

From *The ARRL Letter*, April 19, 2018

New 630-Meter Band Reported "Very Busy"

Amateur Radio got two new bands last year, and amateurs are beginning to use them. Ralph Wallio, W0RPK, of Greenville, North Carolina, and others who took part in ARRL's WD2XSH Part 5 Experimental operation or have a deep interest in what now is the 630-meter band (472 - 479 kHz), say activity is picking up.

Wallio maintains an informal database that tracks the activity of (http://njdtechnologies.net/wp-content/uploads/2015/08/630m-WAS-list-041618.pdf) stations on a state-by-state basis,.as well as how many states each station has worked. Topping the list is Eric Tichansky, NO3M, in Pennsylvania, with 36 states worked on 630 meters, and 35 confirmed, including Hawaii and Alaska. NO3M, who also operates as W3CDX, reports eight DXCC entities worked on the new band.

"During the past 6 months, our list of stations in the US participating in QSOs on 630 meters has steadily increased to 108 stations across 39 states," Wallio told ARRL. "As of mid-April 2018, we have 6 months of operating experience over the past winter. Our 630-meter band has been very busy."

Wallio said modes frequently used for 630-meter contacts include CW, JT9, WSQ (weak-signal QSO), and FT8, with occasional additional digital mode experiments and SSB. Numerous US stations are also participating in WSPR beacon transmission, reception, and reporting on 472 kHz. "An analysis of the past 30 days finds 59 stations occasionally transmitting 630-meter WSPR beacons in the US," Wallio added.

In his days operating under a Part 5 Experimental license, Eric Tichansky, NO3M, ran a modified a Heathkit SB-1000 linear for 630 meters, so he could generate sufficient power to obtain the 100 W ERP permitted under that grant. His current solid-state amp is much more modest.

Transatlantic and transpacific contacts on the new band also have been reported.

John Langridge, KB5NJD, posts a daily discussion of 630 meter http://njdtechnologies.net/category/630-meters/ operations and conditions. He advises stations operating on 630 meters to upload their logs to Logbook of The World, so 630-meter operators participating in the 2018 ARRL International Grid Chase (IGC) can receive credit.

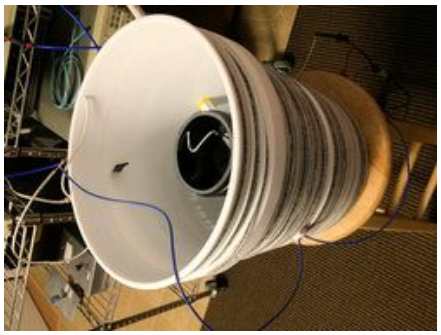
Another WD2XSH participant, Rudy Severns, N6LF, discusses LF-MF antenna design on his website, with notes at: http://www.antennasbyn6lf.com/ and http://www.antennasbyn6lf.com/2017/02/lf-mf-antenna-notes.html. An archive of 600MRG discussions also is available at: http://mailman.qth.net/pipermail/600mrg/.

Virginia Radio Amateur Completes Contacts on All 29 Ham Bands

Brian Justin, WA1ZMS, in Virginia, saved the lowest band for last. On April 11, he completed a CW contact on the new 2200-meter band with K3MF in Pennsylvania, wrapping up a sweep of completed contacts on all 29 Amateur Radio bands. Justin is a bit of an old school guy -- he worked K3MF on CW, and now he's awaiting a QSL card. A paper QSL card.

"Wow!" Justin told ARRL. "Not an easy QSO. Had to use TMO reporting, but we did it as if it was an Earth-Moon-Earth QSO." In TMO reporting, T = Signal just detectable; M = Portions of call copied, and O = Complete call set has been received. Justin used his Icom IC-7300 for his receiver. "I needed the AGC on to keep the static crashes from blowing my ears off," he recounted. His antenna for both receiving and transmitting was a 160-meter dipole fed as a Marconi T antenna against ground. "A 2.5 mH variometer built on a 5-gallon bucket is used to tune the antenna to resonance," he explained. "Ground impedance at 136 kHz is around 40 ohms, so most of the RF is lost as heat in the Earth." Justin said it took several hundred dollars' worth of ground rods and copper wire to attain the 40-ohm ground impedance, given soil conditions at his location.

"I started with 100 W," Justin said. "K3MF had trouble hearing me -- his QRM was 20 dB over S-9. So we set up a new sked. I added the kW amp on my end, and as soon as I hit 600 W, all of the smoke detectors in the house went off from the RF." He said he had to stay at 500 W for the contact. Reception was a challenge as well. "All light dimmers need to be off, so I can hear anything," he said. Input to the antenna system is one thing on 136 kHz. Effective radiated power (ERP) is another. Justin's ERP was 500 mW, just 3 dB below the FCC limit for the band.



The variometer at WA1ZMS for 2200 meters is built from readily available components. [Brian Justin, WA1ZMS, photo]

Justin said he started working his way through the bands at the high end of the spectrum, those allocations above 24 GHz. "By the time 2002 came around, I had managed to have built enough millimeter-wave gear to complete formal QSOs, with QSL cards, on all the bands at the time," he told ARRL. "On the bands above 24 GHz, I had to build two stations and pass one off to K2AD, W4WWQ, or WA4RTS to be on the other ends of these VUCCs and QSOs."

To consider it a valid contact, Justin said he used the New England Weak Signal Group (NEWS) guideline of at least a 1-kilometer distance on each band. "While at first this seems very easy, very few hams have even had a QSO across a bench top on bands like 134 GHz, much less over 1 kilometer," he said.

By 2003, Justin had confirmed contacts (and paper QSLs) on each band from 1.8 MHz to 300 GHz. He submitted his cards to NEWS, which presented him with a framed award and plaque -- the very first "Worked All Bands Award."

Since then, a few ham bands have changed. For example, the 2.5-millimeter band shifted from 120 GHz to 122 GHz, and the 2-millimeter band moved down from 145 GHz to 134 GHz. "In order to stay current with the award, I built gear for those new allocations as well and made QSOs, VUCCs, and more DX," he said. Throughout this process, he earned the first-ever ARRL VUCC Awards for 47 GHz, 76 GHz, 122 GHz, 134 GHz, and 241 GHz, and even went so far as to make the first contact on a less-than-1-millimeter band, 322 GHz. "Many world DX records were made as well along the way," he said. "The most rewarding one for me was 114 kilometers on 241 GHz."

When 630 and 2200 meters became official last year, Justin had his work cut out for him. As one of the ARRL WD2XSH Experimental stations, he made quick work of 630 meters, contacting NO3M on SSB the day after the band opened for Amateur Radio work. His CW QSO on 2200 meters came last week -- about 250 kilometers (155 miles). He's hoping to see the QSL card this week.

SCCARA Flea Market

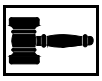
Thanks to all who helped out at the April 14th Flea Market that was sponsored by SCCARA. We had a good showing of dedicated club members. There also were ASVARO board members who helped. They wanted to see what the new venue involved since they will be hosting their events during coming months. Let me also thank the gate keepers for maintaining a smooth operation at the new location.

Not having heard any adverse comments from Fry's it seems that we fulfilled our end of the agreement. ASVARO has submitted a new contract for holding the rest of the flea markets at Fry's. I'm sure, seeing how orderly SCCARA's flea market went and how it brought them customers and publicity, they will not have any qualms about signing the agreement allowing future flea markets. We owe debt of gratitude to Ed Fong for initiating the first contact with Fry's.

Lou WA6QYS

Meeting Minutes

General Meeting, April 9, 2018



Kaiser Santa Clara, 700 Homestead Rd., Hospital Building Rm. B-06

Meeting called to order by President Gregg Lane at 19:32. Introductions were made.

Announcements:
1) SVECS Breakfast April 28, 2018 at the Santa Clara Senior Center (corner of Fremont and Monroe), $5 all you can eat breakfast, $125 Door Prize. Helpers start at 7:30, breakfast at 9:00, program at 10:00. Speaker: Lisa Schoenthal (Em. Services Coord. Santa Clara.) "Medical Response to Disaster"

2) Club Station at the Red Cross will open after the SVECS Breakfast (around noon) on April 28, 2018.

3) SCCARA will host the Electronics Flea Market this Saturday, April14, 2018 at FRY'S, Sunnyvale. There will be a sign up sheet for volunteers to work the flea market. See Lou WA6QYS for more information.

Gregg introduced the speakers for the night:
Speaker #1 Kailash Gupta VU2KIZ/KG6SQR will be returning to India and asked if he could share his history in Amateur Radio and Emergency Management at this meeting. He also stated that he was looking for information and advice about which radio he should buy to take back to India (see him during refreshment break.)

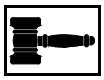
Speaker #2 Don Steinbach AE6PM is an Electrical Engineer and a former SCCARA President. Don is an active Home Brewer and has spoken to SCCARA before on subjects from Coax Stubs for filtering to building his Remote Ham Station to Antenna Modeling. Tonight's subject is "Battery Voltage Regulators." When a radio is installed in an automobile and the engine is running, the voltage provided should be 13.9 volts. However, if you turn the engine off, or if you are setting up a portable station, you will only have the battery voltage (not the charging system voltage). Radios will not be as happy.

Don talked about what voltage a fully charged battery should have and how that voltage dropped when a load was placed on the battery (in our case when a radio was receiving or transmitting). He then showed how the battery voltage also dropped as the battery was discharged. When Don showed the minimum voltage required for several common radios, it became evident that the voltage provided by the battery could go below what the radios needed even when the battery still had significant energy. The solution was to insert a Battery Voltage Regulator between the battery and the radio that would boost and stabilize the voltage so that the radio would stay happy. Don walked us through the Battery Voltage Regulator that he Home Brewed, and then compared his finished project to several designs that are commercially available.

The meeting was adjourned and refreshments were enjoyed by all.

Gregg Lane

Board Meeting, April 16, 2018



Red Cross Build 2731 N. 1st. St., San Jose, CA.

Meeting called to order by President Gregg Lane at 19:55.

Attendance: President Gregg Lane KF6FNA; Treasurer Goetz Brandt K6GKB; Station Trustee Don Village K6PBQ; Directors: Lou Steirer WA6QYS, Wally Britten KA6YMD, Clark Murphy KE6KXO, James Rustermier KI6ZSK; Editor Gary Mitchell WB6YRU.

Announcements:
1) SVECS BREAKFAST April 28, 2018 at the Santa Clara Senior Center (corner of Fremont and Monroe) $5 all you can eat Breakfast, $125 Door Prize. Helpers start at 7:30, 9:00 breakfast, 10:00 program. Speaker: Lisa Schoenthal (EM. Services Coord. Santa Clara) "MEDICAL RESPONSE TO DISASTER"

2) SCCARA CLUB STATION at the Red Cross open April 28, 2018 after SVECS BKFST. and May 26, 2018.

Secretary's Report: Rusty moved to accept the March BOD minutes as published in the SCCARA-GRAM, second by Lou. Carried.

Treasurer's Report: Goetz will e-mail report to BOD.*

Trustee's Report: Don said that the FLORIDA QSO party will be running on April 28 when the Club Station is open.

Repeater Report: Don Steinbach has turned over the controller for the 2M repeater to Goetz. It still needs repair. Wally is working on testing the phone line to the 440 repeater.

Old Business:
1) Field Day: The club station at the Red Cross is available to SCCARA for Field Day. Details to be worked out with George Williams.

2) SCCARA Flea Market: Lou gave preliminary results of Flea Market: space rental = $3,005, food = $475. ASVARO fee to be determined later (still needs to be paid.)

3) QSL cards: Gary showed more examples for SCCARA QSL

cards. BOD unanimously agreed to a design.

4) SCCARA still needs a Secretary. Gary purchased a laptop to be used by the secretary and to store records.

5) Printer: Rusty is still working on obtaining a printer for SCCARA.

6) Gary turned in letter to Dave DeGroot .

Adjourned at 21:30

Gregg Lane

* e-mail from Treasurer on 4-17-2018

Checking = $6,605.41
Savings = 500.07
Cash = 4,028.82
Total = $11, 134.30 (includes Flea Market deposit)

Packet Pieces

Downloaded from the BBS packet network:

==========
Date: 27 Mar 2011 18:24
From: W1GMF@W1GMF
To: HUMOR@USA
Subject: Canadians

On the sixth day God turned to the Archangel Gabriel and said: "Today I am going to create a land called Canada, it will be a land of outstanding natural beauty. It shall have tall majestic mountains full of mountain goats, and eagles, beautiful sparkling lakes bountiful with bass and trout, forests full of elk and moose, high cliffs over-looking sandy beaches with an abundance of sea life, and rivers stocked with salmon."

God continued, "I shall make the land rich in oil so as to make the inhabitants prosper, I shall call these inhabitants Canadians, and they shall be known as the most friendly people on the earth."

"But Lord," asked Gabriel "don't you think you are being too generous to these Canadians?"

"Not really," replied God "just wait and see the neighbors I am going to give them."

==========
Date: 29 Mar 2011 00:23
From: W1GMF@W1GMF
To: HUMOR@USA
Subject: Cell Phone Etiquette

Friends and I were chatting over dinner in a restaurant. A man at the next table told his cell-phone caller to hold on. Then he stepped outside to talk.

When he returned, I said, "That was very thoughtful."

"I had no choice," he nodded and said to me. "You were making too much noise."

Need Help?

Amateurs have a long history of helping each other. An experienced amateur who helps another is traditionally called an "Elmer." If you have a question or problem, you are encouraged to ask one of SCCARA's Elmers. Below is a list of topics and who to contact for each. If your topic isn't listed, ask one of the Elmers under the topic that comes closest and we'll ask around.

If you consider yourself to be reasonably competent in at least one area of amateur radio and would be willing help others, please fill out an Elmer form (available from the club secretary or on our web site).

Topics:
Antennas, feed-lines, tuners: **NV6W, W6JPP, K6PBQ**
CW (Morse code): **NV6W, K6PBQ**
DX (long distance, propagation): **NV6W**
EchoLink:
Emergency operating, preparedness: **WA6QYS**
HF operating techniques: **NV6W, K6PBQ**
Homebrew projects, construction: **WB6YRU**
Legal, FCC rules: **WB6YRU**
License testing, new amateurs: **W6JPP**
Lightning protection, grounding: **WB6YRU**
Packet Network (BBS, forwarding): **WB6YRU**
SCCARA (club inner workings): **K6PBQ, WB6YRU, WA6QYS**
Station set-up, equipment: **K6PBQ, W6JPP**
TVI, RFI: **WB6YRU**

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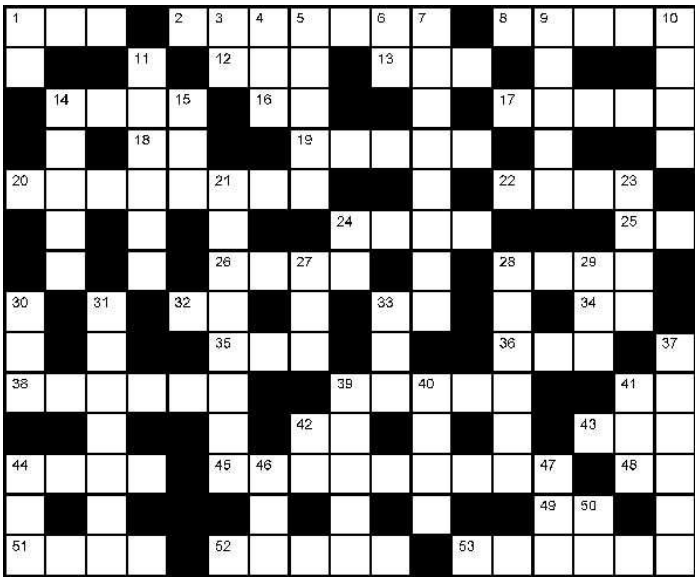
Newsletter Notes

What do you think of the puzzles in this and last edition? I don't have any more. If you have any or can get them, please consider submitting them to the *SCCARA-GRAM*. Just one thing: If you submit something that's copyrighted, remember to include written permission. Even small publications like the *SCCARA-GRAM* have to worry about such things.

As for the crossword puzzle, I'm not sure where I got it, but it's been on my hard drive since 2003, (apparently no copyright).

73, Gary WB6YRU, editor

The Amateur Radio Crossword Puzzler

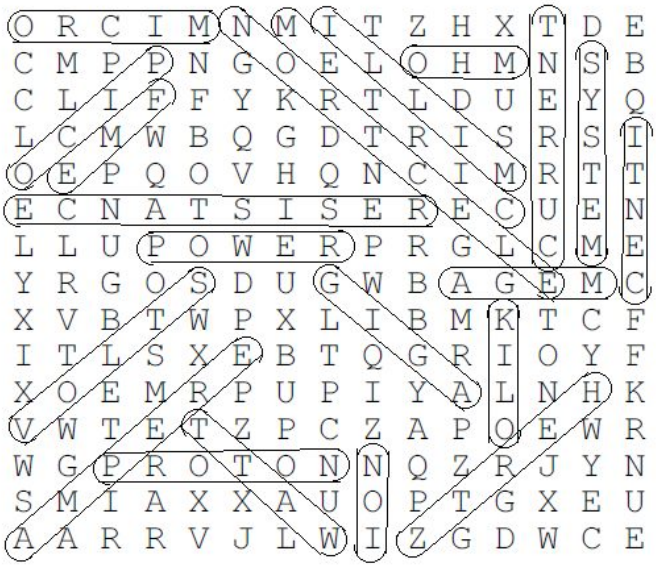


By H. Ward Silver, N0AX

Across
1. What we are
2. Names
8. Interrupt
12. Soviet space station
13. Opposite of "Mark" (abbr.)
14. Ionospheric hop
16. Lightest metal (symbol)
17. Simulated or passive replacement
18. Closing down (CW)
19. Output amplifier
20. Short, sharp audio interference
22. Combine with 29 Down to make a contact
24. Snowman from the Himalayas
25. Prefix meaning "no longer"
26. Typewriter
28. No amp means .... feet
32. From (CW)
33. Abbreviation for KP4 QTH
34. Abbreviation for KL7 QTH
35. Semi-automatic manual key
36. Radio
38. Intermediate amplifier stage
39. Uninterrupted or perfect
41. Category for one operator (abbr.)
42. Ground plane (abbr.)
43. Maximum power (abbr.)
44. Make a second QSO
45. Certificates
48. Central American country (prefix)
49. Armstrong invented this mode (abbr.)
51. Headphones
52. Styles of sending CW
53. An unstable CW signal does this

Down
1. Telegrapher's laugh
3. Oldest voice mode (abbr.)
4. Failed to work the DX (abbr.)
5. Long-term frequency change
6. And (CW)
7. Interference from over modulation
9. Impure CW tone
10. Use these to send CW
11. License
14. Unwanted emissions
15. Please (CW)
21. Equipment you built yourself
23. More than a day, less than a month
24. Young lady (CW)
27. List of contacts
28. Spurious received signal
29. Combine with 22 Across to make a contact
30. Poor operator
31. Type of antenna match
33. Super Hammarlund receiver
37. Receives a message
39. Talk and listen on different frequencies
40. Output adjustment on tube amplifier
41. Emergency test
42. Good luck (CW)
44. DX'ers club (abbr.)
46. French friend
47. Interference from radiofrequency signals
50. Male salutation (abbr.)

Answers to last month's Scramble



ELECTRON	KILO	SYSTEM
MEGA	EMF	METRIC
AMPERE	MICRO	CENTI
MILLI	OHM	VOLTS
PICO	CURRENT	GIGA
HERTZ	POWER	ION
PROTON	WATT	RESISTANCE

SCCARA
Santa **C**lara **C**ounty **A**mateur **R**adio **A**ssociation
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SAN JOSE CA 95103-0106

FIRST CLASS

ADDRESS SERVICE REQUESTED

SCCARA Membership Form for 2018

If renewing and none of your info has changed, we only need your name and call

Name: _____ Call: _____ Class: _____

Address: _____ Licensed since (year): _____

City: _____ State: _____ Zip+4: _____

Telephone: _____ ☐ New Member ☐ Renewal ☐ I'm also an ARRL member

E-mail: _____

only for club communications and the SCCARA-GRAM newsletter (pdf)

Membership type and dues: ☐ **Individual, $20** ☐ **Family, $25** ☐ **Student, $10** (under 18)

Memberships start January 1 and expire December 31.
Family memberships (more than one member per household): please include the above info for each member, use separate forms.

New members:
Dues are prorated: dues x (11 - month) x 10% (Example: July would be $20 x (11-7) x 0.1, which is $8)
If joining in November or December: normal dues for next year, the rest of this year is included free.

☐ **I want the paper newsletter delivered by U.S. Mail for an additional $30 per year**
(Prorated, $2.50 per month. That's $27.50 if starting in February, $25 if starting in March, etc.)

$ _____ **Total** enclosed

Give this completed form and payment to the Secretary or Treasurer at any meeting or mail to the club address.

Rev. 5/1/2018