

# SCCARA-GRAM



## Santa Clara County Amateur Radio Association

Volume 31, Number 1

January 2015



### Prez Sez

Now that Christmas is behind us for another year I hope all is well with you and your family. Perhaps you found something extra nice under your Christmas tree... perhaps a HT?

Remember when we used to refer to HTs as bricks? That's because of the heavy NiCd batteries they carried. Sure they are lighter than lead acid batteries but nevertheless when you clipped a brick to your belt your pants were in danger of falling down.

The new HTs are so much better. More memory for one but most of all, they are way lighter. That's because they are using a lithium ion battery. Less than half the weight and far better discharge cycles with faster charging too. You need a new battery charger but that is also good because the new chargers are also lighter and more efficient.

The element Lithium is a strange metal. It is one of three metals that reacts so violently in water that it extracts hydrogen from H<sub>2</sub>O and actually burns in water. Think about it, a fire that not only can't be put out with water but is accelerated by applying water. Pretty scary stuff!

What if you had a lithium fire in an airplane? It could be so hot that it could burn through the skin of the airplane. On August 7, 2004, a container of lithium-ion batteries and other goods was being loaded on a Boeing MD-11 FedEx freighter heading to France from Memphis, Tennessee. Personnel noted the container was smoking. When the Memphis fire department responders opened the container, a fire flared up inside. Damage to the container and other freight was estimated as \$20,000, a small fraction of the cost in dollars and life if the airplane had taken off.

Analysis showed in general, the outsides of the packages within in the top portion of the container were damaged, but their contents were untouched. The lower portion of the container carrying the batteries was the only part with real fire damage to its contents. Apparently the fire was the result of the batteries shorting caused by improper packing. The lithium in the batteries did not actually burn which is fortunate because a fireman's credo is: if it flames, soak it.

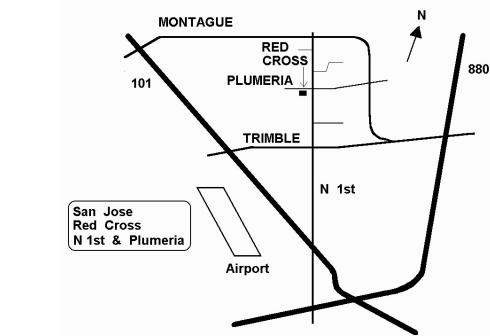
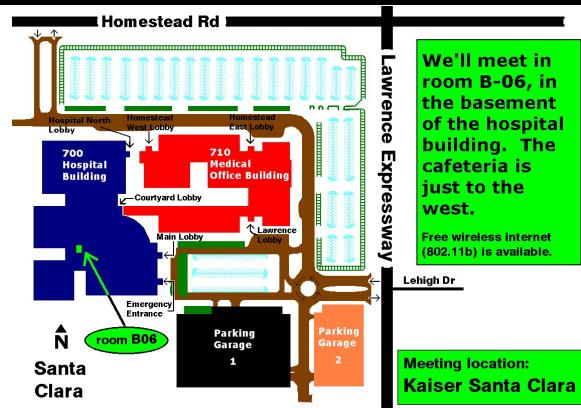
In the aftermath there was a whole lot of thinking what if the plane had actually taken off and what if a real lithium fire had broken out. The NTSB changed the rules stating that lithium batteries could not be shipped as air cargo and all other batteries would be classified as hazardous materials for transportation sake.

### Calendar

- 1/12      SCCARA General Meeting  
1/19      SCCARA Board Meeting--(San Jose Red Cross, 7:30p, all are welcome)

### General Meeting

- Day:                          Monday, Jan. 12, 2015  
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. Permission to reprint articles is hereby granted, provided the source is properly credited.

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

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.

**Web page:** <http://www.qsl.net/scara>. (Webmaster: Wally Britten, KA6YMD, 408-293-3847, ka6ymd@arrl.net)

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(all officers are also directors)

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**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.

**TELEPHONE NUMBERS**

SCCARA contact Clark KE6KXO: 408-262-9334  
Amateur license testing, ARRL/VEC Silicon Valley VE group,  
Morris Jones, AD6ZH: 408-507-4698

This quickly put cell phones and computers in question. Could they be carried aboard or checked in suitcases? The restriction was revised to state that batteries containing one ounce or less of lithium were exempted. The trouble was TSA couldn't tell what was lithium contributed weight and what was other material weight. The KISS principle was employed and the regulation was interpreted so as to read all computers and cell phones were exempted. By the time you read this, International regulations applicable to air shipments of lithium metal batteries will have changed on January 1, 2015 to officially read as already interpreted. Compliance with the new regulations is mandatory. If you are worried that your HT is not a cell phone and therefore not exempted let me put you at ease. Again employing the KISS principle HTs are considered funny looking cell phones. Who is to argue with TSA? KISS

Lithium technology has advanced tremendously in the early 2000s. Now the lithium ion battery is not the only lithium battery in town. There is also the Lithium iron phosphate (LiFePO4), also known as LFP to name just one. These batteries were deemed not capable of creating a lithium fire which may be true. However they are still hasmat and are still capable of starting a fire when shorted. Don't forget in the aforementioned lithium ion battery fire the lithium did not burn.

Recently I have been working on electric vehicle development. My work goes deep into the innards of the vehicle battery. One battery contains 28 cells producing over a hundred volts at over a hundred amps. That's 10,000 watts of lethally! It's DC too so it will paralyze your body until you are crispy critters (technical term). Naturally a safety briefing was in order before beginning work.

My first question was, "Why are the major electric vehicle builders still using lithium ion technology rather than the safer lithium iron phosphate technology?" The answer, "Because LiFePO4 is not a safer technology! All lithium technologies have safety problems. Their electrolytes burn and they become more combustible as they discharge. Lithium ion is the safest of the lot."

I asked, "Then it looks like they fooled the NTSB into thinking Li-ion was the worst?"

"That's because they just concentrated on the lithium part and forgot about the electrolyte problem. The electrolyte, the liquid part, can leak out of a cracked battery case and go hell knows where."

"Yes, I can see where the electrolyte can leak into the floor and lay there waiting to be ignited."

"A virtual ticking time bomb. Scary stuff!"

For a short time I worked on the Boeing 787, the first large plane to use lithium ion batteries. The experience has not been a happy one for Boeing. On January 7<sup>th</sup> of 2013 a JAL Boeing 787 caught fire at Boston's Logan International Airport and just nine days later on January 16<sup>th</sup> of 2013 another battery fire prompted an All Nippon Airways flight to make an emergency landing in Japan. This caused the grounding of the newly launched 787 Airplane for three months.

The two fires were in different parts of the airplane. Only the battery was common so finding the problem and attaching blame was easy. The National Transportation Safety Board (NTSB) analysis showed not only had Boeing botched the battery design but their supplier had made changes to the design in an unauthorized manner and failed to maintain quality control standards. Finally the FAA design oversight had failed to see the problem coming. Boeing redesigned the batteries with ceramic

insulation between the cells, a steel box to contain any short circuit, and a tube to carry smoke and flammable electrolytes overboard.

OK back to amateur radio. We are told that lithium ion batteries used in our HTs are the safest of the lithium type batteries but obviously no battery is entirely safe. At a minimum they contain toxic substances and are legitimately labeled hazardous materials. As the energy density goes up (high energy density is why we use lithium in the first place) the greater the risk.

Here is what Doug Person, K0DXV experienced: "Today I was charging a new 12 volt Li-Io battery pack; Fi[r]st time being charged. I was using a specialized automatic Li-Io charger. Nonetheless, the battery pack exploded with an incredible force, blowing items off my workbench within 2 feet of the explosion. The burn area on my workbench exceeds 12 inches. If I hadn't been wearing safety glasses, I'm sure my eyes would have been badly affected. The sound level was at least equal to a 44 magnum. My facial hair has been burned and there are numerous particles embedded in my skin, walls and table. The furthest piece, embedded in ceiling, is at least 10 feet from the ignition point. About 2 ounces of C4 would perform about the same. I consider myself lucky in that I was wearing my welding jacket which protected my body very well. I was only 18 inches from the pack when it exploded."

Scary? You bet but, you are not scared away. Let's really get personal then. You have weighed the pros and cons and accepted the risk of lithium technologies. OK, I have too. What do you do if the battery pack on your HT starts smoking?

Answer: If possible get the battery pack / radio outside onto a metal or cement surface. Avoid dirt and water if you can. If you can't get outside place it in a metal pan or sink. DO NOT run water in the sink. Do not attempt to use a fire extinguisher. Just let it burn out if it is going to burn. And I think it goes without saying -- avoid inhaling the smoke.

Foot Note: I once asked a San Jose Fire Captain, "How do respond to an electric car fire?" His reply, "We go two hundred yards upwind and watch."

73, Fred, AE6QL, ae6ql@arrl.net



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## ARRL News

From *The ARRL Letter*, December 18, 2014

### "Amateur Radio Parity Act" Campaign Will Resume in New Congress

Largely as the result of a grassroots campaign, "The Amateur Radio Parity Act of 2014" (H.R. 4969, [beta.congress.gov/bill/113th-congress/house-bill/4969](http://beta.congress.gov/bill/113th-congress/house-bill/4969)) attracted the support of 69 members of the US House of Representatives in addition to that of its sponsor, Rep Adam Kinzinger (R-IL). While the just-adjourned 113th Congress did not enact the bill, the effort to gain passage of the legislation will begin anew when the 114th Congress convenes in January. Introduced with bipartisan support last June, H.R. 4969 called on the FCC to apply the "reasonable accommodation" three-part test of the PRB-1 federal pre-emption policy to private land-use restrictions regarding antennas. The limited PRB-1 pre-emption currently applies only to state and

municipal land-use ordinances. The FCC has indicated its reluctance to provide the same legal protections from private land-use agreements -- often called covenants, conditions, and restrictions (CC&Rs) -- without direction from Congress. ARRL Regulatory Information Manager Dan Henderson, NIND, stressed this week that the fight is not over.

"While we are disappointed that the bill did not make it through the process during the session, the effort was extremely energized by the efforts of thousands of ARRL members who participated in our grassroots lobbying effort," Henderson said. "In just 6 short months we gained tremendous traction for the Amateur Radio Parity Act."

Henderson explained that sometime after the new Congress is called into session in January, a new "Amateur Radio Parity Act" bill with a new number will be introduced into the US House. "Once this happens, the ARRL will gear up for a fresh effort to push this legislation forward," he added.

In a note to ARRL Section Managers this week, ARRL CEO David Sumner, K1ZZ, thanked Section leaders and Field Organization volunteers on behalf of the ARRL Board of Directors and Headquarters staff for their help in garnering legislative support for H.R. 4969. "We had hoped to gain 30 co-sponsors for the bill and ultimately ended up with 69, plus the sponsor," Sumner noted. "The overwhelming majority of these 70 supporters are returning in January, which gives us a good base on which to grow additional support."

Sumner said the objective for 2015 is to continue the momentum, gathering enough support to move the bill through the Energy and Commerce Committee. "We have received expressions of interest from the Senate side and are hoping to have the bill introduced there as well," he added.

Henderson said the bill would not have attained its current level of support in the US House without the thousands of letters and phone calls made by ARRL members to their congressional representatives. "The success of this crucial issue relies on the efforts of all radio amateurs and ARRL members," he said. "We know you will step forward in the new year, when we renew our efforts on Capitol Hill."

The ARRL H.R. 4969 web page provides additional information, ([www.arrl.org/hr-4969](http://www.arrl.org/hr-4969)).

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## December Luncheon





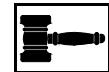


by Goetz Brandt, K6GKB

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## Meeting Minutes

### General Meeting, Dec. 13, 2014



{No minutes received by the deadline}

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### Board Meeting, Dec. 15, 2014



{The Dec. board meeting was canceled}

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## Packet Pieces

### Downloaded from the BBS packet network:

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Date: 10 Dec 2013 08:16  
From: GM3YEW@GB7YEW  
To: HUMOR@WW  
Subject: Jokes 9/12

=====

I had a secretary who claimed that she liked to live like she types: Fast and with lots of mistakes.

Did you hear what happened to the butcher? He backed into a meat slicer and got a little behind in his work.

### Things To Make You Ponder

1. My husband and I divorced over religious differences. He thought he was God and I didn't.
2. I don't suffer from insanity I enjoy every minute of it.
3. I work hard because millions on welfare depend on me!
4. Some people are alive only because it's illegal to kill them.
5. I used to have a handle on life but it broke.
6. Don't take life too seriously, no one gets out alive.
7. You're just jealous because the voices only talk to me
8. Beauty is in the eye of the beer holder.
9. Earth is the insane asylum for the universe.
10. I'm not a complete idiot -- some parts are missing.
11. Out of my mind. Back in five minutes.
- 12 . N y q u i l : t h e s t u f f y , s n e e z y why-the-heck-is-the-room-spinning medicine.
13. God must love stupid people, he made so many.
14. The gene pool could use a little chlorine.
15. Consciousness: that annoying time between naps.
16. Ever stop to think and forget to start again?
17. Being "over the hill" is much better than being under it!
18. Wrinkled was not one of the things I wanted to be when I grew up.
19. Procrastinate now!
20. I have a degree in liberal arts. So, do you want fries with that?
21. A hangover is the wrath of grapes.
22. A journey of a thousand miles begins with a cash advance.
23. Stupidity is not a handicap. Park elsewhere!
24. They call it PMS because Mad Cow Disease was already taken.
25. He who dies with the most toys is nonetheless dead.
26. A picture is worth a thousand words but it uses up thousands of times the memory.
27. Ham and eggs: A day's work for a chicken, a lifetime commitment for a pig.

28. The trouble with life is there's no background music.

29. The original point and click interface was a Smith and Wesson.

30. I smile because I don't know what the heck is going on.

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### Zimmerman Brothers Butcher Shop:

It's a summer holiday weekend and a man walks into a butchers which has a sign in the window saying "Ground Sirloin: 29 cents per kilo". The man says "I'm having a cookout this weekend. I'd like 5 kilos of your ground sirloin please."

Vaughn the butcher shakes his head and says "Sorry. We're all out."

The man disappointed goes down the street to Zimmerman Brothers Butcher Shop and asks "How much is your ground sirloin?" Samuel the older brother says "It's \$3.29 per kilo."

"Three twenty nine!?!?" exclaimed the customer. "Just up the street he sells it for 29 cents!"

Samuel Zimmerman smiles calmly at the gentleman and asks "Does he have any?"

"No. He's out of it right now."

"Well" says Zimmerman. "When I don't have any ,I can sell it for 19 cents per kilo!"

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Date: 11 Dec 2013 01:06

From: GM3YEW@GB7YEW

To: HUMOR@WW

Subject: Drummer vs Director

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A musical director was having a lot of trouble with one drummer. He talked and talked and talked with the drummer, but his performance simply didn't Improve.

Finally, before the whole orchestra, he said, "When a musician just can't handle his instrument and doesn't improve when given help, they take away the instrument, give him two sticks, and make him a drummer."

A stage whisper was heard from the percussion section: "And if he can't handle even that, they take away one of his sticks and make him a conductor."

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Date: 1 Dec 2013 01:06

From: GM3YEW@GB7YEW

To: HUMOR@WW

Subject: Jokes 1/12

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A magician works on a cruise ship. The audience was different each week, so the magician did the same tricks over and over again. There was only one problem: The captain's parrot saw the shows each week and began to understand how the magician did every trick.

Once the bird understood a trick, he would shout in the middle of the show, "Look, It's not the same hat!" or, "He's hiding the flowers under the table!" or "All the cards are ace of spades."

The magician was furious but couldn't do anything. It was, after all, the Captain's parrot.

Then one stormy night the ship unfortunately sank.. The magician luckily found himself on a piece of wood floating in the middle of the sea, as fate would have it ... with the parrot.

They stared at each other with hatred, but did not utter a word. After an hour the parrot finally said...

"OK, I give up. Where's the ship?"

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Date: 8 Jun 2010 02:41  
From: W1GMF@W1GMF  
To: HUMOR@USA  
Subject: Deflated Ego

I'm a counselor who helps coordinate support groups for visually- impaired adults. Many participants have a condition known as macular degeneration, which makes it very difficult for them to distinguish facial features. I had just been assigned to a new group and was introducing myself.

Knowing that many in the group would not be able to see me, I jokingly said, "For those of you who can't see me, I've been told that I look like a cross between Paul Newman and Robert Redford." Immediately, one woman called out, "We're not THAT blind!"

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Date: 5 Jun 2010 02:41  
From: W1GMF@W1GMF  
To: HUMOR@USA  
Subject: Dumb Criminal

The judge read the charges, then asked, "Are you the defendant in this case?"

"No, your honor, sir," replied Bob, "I've got a lawyer to do the defendin'. I'm the guy who done it."

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## 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 including 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 from the club secretary.

### Topics:

Antennas, feed-lines, tuners: NV6W, W6JPP, K6PBQ, WB6YRU  
Lightning protection, grounding: WB6YRU  
Station set-up, equipment: K6PBQ, W6JPP  
TVI/RFI: WB6YRU  
Homebrew projects, construction: KD6FJI, WB6YRU  
Computers: older IBM PC: WB6YRU  
Packet Network (BBS, forwarding): WB6YRU  
Code operating and installations: NV6W, K6PBQ  
DX (long distance/propagation): NV6W  
Emergency operating/preparedness: WA6QYS  
HF operating techniques (SSB, CW): NV6W, K6PBQ  
Legal/FCC rules: WB6YRU  
SCCARA (club inner workings): K6PBQ, WB6YRU, WA6QYS  
EchoLink: KK6MX  
License testing, new amateurs: W6JPP

### Contacts:

NV6W, James D. Armstrong, Jr.,  
evening & msg: 408-670-1680

KD6FJI, Lloyd DeVaughns,  
408-225-6769 e-mail: kd6fji@arrl.net

KK6MX, Don Apte, 408-629-0725  
e-mail: kk6mx@aol.com

W6JPP, John Parks, 408-309-8709  
e-mail: w6jpp@arrl.net

K6PBQ, Don Village, 408-263-2789  
e-mail: donvillage7@yahoo.com

WA6QYS, Lou Steirer, 408-241-7999  
e-mail: wa6qys@arrl.net

WB6YRU, Gary Mitchell, 408-269-2924  
packet: home BBS N0ARY  
e-mail: wb6yru@ix.netcom.com

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## Newsletter Notes

For a few years now the regular \$20 dues has been 2/3 of what it costs to print and mail the *SCCARA-GRAM*, (not counting other club expenses). Strange as it may seem, that means the club actually *loses* money on each member who chooses to receive the *SCCARA-GRAM* by postal mail. Rather than increase the dues for everyone, last year the board decided to have a separate fee for those wanting the mailed newsletter. It goes into effect now.

If you get the newsletter electronically, this doesn't affect you. If you've already paid the new fee, then you'll continue getting the mailed version as usual. If you have been getting the mailed newsletter and have *not* paid the new fee, this will be your last mailed newsletter.

For those who are new to the electronic version, you'll get a brief email each month letting you know the new *SCCARA-GRAM* is ready for download. The electronic version is on our web site ([www.qsl.net/scvara](http://www.qsl.net/scvara)) in pdf format. The email notices include a direct link for your convenience. If you don't already have the Adobe pdf reader, it's free, you can download it from their web site ([www.adobe.com](http://www.adobe.com)).

73, Gary WB6YRU, editor

**SCCARA**

Santa Clara County Amateur Radio Association  
PO Box 106  
SAN JOSE CA 95103-0106

Affiliate of the ARRL,  
American Radio Relay League



FIRST CLASS

ADDRESS SERVICE REQUESTED

**SCCARA Membership Form for 2015**

If none of your info has changed, fill in name and call only

Name: \_\_\_\_\_ Call: \_\_\_\_\_ Class: E A G T N

Address: \_\_\_\_\_ Licensed since (yr): \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ - \_\_\_\_\_ Licence Expiration Date (mo/yr): \_\_\_\_\_

Telephone: \_\_\_\_\_  New Member  Renewal  
 I'm also a member of the ARRL

E-mail: \_\_\_\_\_

You'll get a short e-mail notice each month letting you know a new SCCARA-GRAM (pdf) is ready for download.

Memberships begin January 1 and expire December 31.

If renewing: annual membership dues are: **\$20 Individual, \$25 Family, \$10 Student** (under 18)

**New members:**

If joining in January: normal dues

If joining in February through October: dues x (11 - month) x 10% (e.g. for July, that's: \$20 x 4 x 0.1, which is \$8)  
If joining in November or December: normal dues. That's for next year, and the rest of this year is included free

I want the newsletter on paper delivered by U.S. Mail for an additional \$30

\$ \_\_\_\_\_ **Dues payment** for:  individual  family  student

For family memberships (members at the same address), please include the following for each member, use separate forms.

Give this completed form (or copy) with payment to the Secretary or Treasurer at any meeting or mail to the club address.