# Spurious Emissions

## The Newsletter of the South Bay Amateur Radio Society

## Editor's Notes
### By John Wright, K6CPO

Welcome to the first issue of 2014. In this issue, SOBARS member Bill Honaker, N9LZ, describes how he built a shack in his garage, Dan Romanchik, KB6NU, has contributed three columns and we have a new contributor in Mike Dinelli, N9BOR, who writes about amateur radio handi talkies.

Again, I would love to have more contributions from SOBARS members. If anyone has an idea for an article they would like to submit, please let me know. K6CPO@cox.net ⚡

## New Members

We would like to welcome the following new members to SOBARS:

| | |
|---|---|
| Beatrice Matthews | KK6IVG |
| Ric Allen | W3DSO |
| Nestor Punales | K6JTT |

ARRLFD14
June 28-29
HAM RADIO
On the Air from Anywhere!

www.arrl.org



**Bill Honaker, N9LZ, working 10 Meter phone at Field Day 2013. Field Day for this year is rapidly approaching. (I wonder what the hammer is for?)**

*John Wright, K6CPO*

## From the President's Shack
### By John Wright, K6CPO

It is with sadness I mention the passing of Jane Cupp, wife of long-time SOBARS member and Club Emergency Coordinator Dick Cupp, K6SJA. Jane passed away on April 2, 2014. There will a Celebration of Life ceremony for her on at 1 PM on Easter Sunday, April 20, 2014. It will take place behind the Ford Building (the Air and Space Museum) in Balboa Park. Our condolences go out to Dick and his family.

The big event of the year is rapidly approaching. Everyone knows what that means: Field Day! Chairman Mark Wallace, KJ6NMJ, is well into the planning for the event. We are going to have the usual varied stations, including 20 meter phone, 40 meter phone, 20 meter digital and 15 meter phone. The Spurgeons, Frank Sr., W6FSS and Frank, Jr., W6FSJ will be cooking their superb carne asada again this year. Joe Bennett, W6VMX, and Jack Moran, N6FUG have again made arrangements for Field Day shirts. The order form is on the last

page of this issue. All you have to do is print the page and take it to the location indicated on the form.

We had a recent occasion to engage in a little long distance "Elmering." We received an inquiry directed to the club e-mail about a ham whose wife had taken her Technician examination in early March but after two weeks had not received her call sign. After several e-mails were exchanged, it became apparent the individual was trying to contact the South Bay Amateur Radio *Association* of Fremont, CA, in the San Francisco Bay area, not SOBARS. After twenty minutes of internet research we were able to find the name of the VE group that conducted the lady's examination and forward her husband's request to them. Several days later, I received an e-mail from the ham saying his wife had finally received her call sign. Mission accomplished!

Every so often, the club receives a QSL card request, usually as the result of Field Day operations. With that in mind, the club's outdated QSL card was updated and will be available to answer QSL requests as they are received. The new design is shown below. ✐



### Building My Shack
Article and Photos By Bill Honaker, N9LZ

I have not been a ham for very long, getting my Tech in July of 2012 and upgrading to Extra in April 2013. However, I have wanted to be a ham since I was a kid. I always dreamed of having a radio station or "shack" all my own. The crackle of static and glow of vacuum tubes warms my heart. I used to dream of radios, amplifiers, tuners, and other miscellaneous arcane equipment crowding my bedroom. QSL cards and maps adorning the walls, log books filled with DX contacts: new friends around the world. The mystery of talking into the ether and being heard around the world, how wonderful!

Well, now the reality. I am a ham. And I really enjoy this hobby. But, where would I set all that radio gear I had dreamed of, if and when I could afford it? Mega kilo bucks for all the bells and whistles. Hmm... Looks like it will take a while to get there. So, what could I do now? Spend on the cheap, sort of, or at least not too much to get my allowance garnished by the XYL Hmmm...

How about building a shack? Great idea! "Honey, I'm getting a big desk for our bedroom…". "WHAT!? No you are not!" So how about the guest bedroom? "No!" Banished to the garage! Well, not exactly, but you know how it goes.

Building my shack in the garage has some advantages. It keeps the rug rats, er, grandkids, away from the expensive toys and provides a measure of quiet and solitude. But it is also cold in the winter, which, if winter ever comes to Southern California again, means I may have to buy a heater. It also provides ready access to my vast tool collection. Can't have too many tools... After all, those honey-do lists are just excuses to buy more tools! And it's easier to run antenna leads across the ceiling and through the walls, than in say the family room that the XYL just finished decorating.

Design goals. Not many... I wanted a clean look, enough desk space for computers, radios, manuals, soldering tools and stuff that seems to be so necessary. Cable management... Very important, but hard to do well. In the large datacenter I run, this is the bane of our existence. Power, more important. One can never have too much nor too many outlets, in both 110v and 220v (just in case I can ever save up to buy one of those 2Kw babies, yeah right, don't hold your breath).

Construction took way longer than planned, but in the process I fixed a few nagging things and added more conveniences in the garage. The garage had one 15A lighting circuit, two 20A gfci outlet circuits, and a 30A 220v circuit. One of the 20A circuits had only one outlet on it, so it was easy to extend. The 30A had almost no load, only running a compressor once in a while. I extended it to where my future amp would go. Also, I ran conduit up inside the wall and out under the eaves for the incoming antenna leads. At the foot of the wall in the corner, the foundation had an opening for electrical conduit coming from the house. This was the perfect place with room for my ground rod, cool. I added drywall and light texture finish on the walls and installed nice overhead lighting for these aging eyes.

Desk... I used as much scrap wood from other projects as possible. That almost worked. The most expensive item of the whole project? The desktop. I used cabinet grade ¾ inch maple, 4x8. It was beautiful and easy to work with. It was stained a nice chardonnay (I need a glass now!) and finished with satin polyurethane. Smooth... I found a rolling glass top computer desk at the thrift store. It had a perfect 3/8in tempered glass top. I keep the band plan and TS-520SE tuning guide under it.

I am enjoying the desk, and adding to it. I definitely need a more comfortable chair. I have very good WIFI coverage from the house, but may run a CAT5 cable from the house at some point, but it's a low priority for now. Belo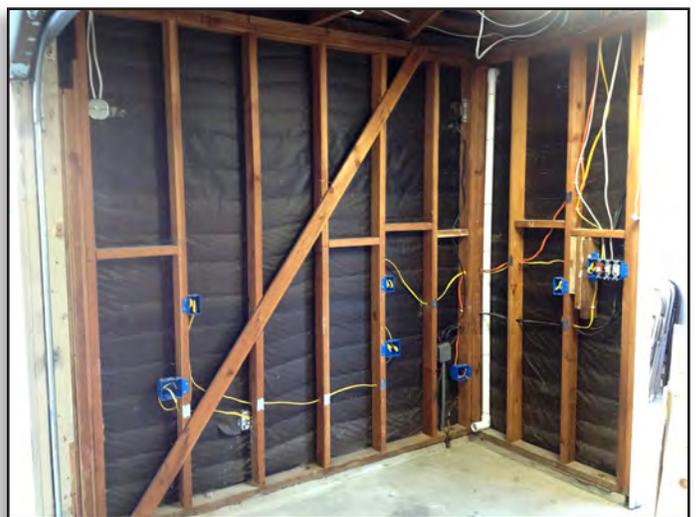w are some pictures for your enjoyment. I hope this will inspire you if you are thinking about building or improving your shack. If you are not yet a ham, well, what are you waiting for? Look at all the fun you could be having!

My latest project, which I hope to have done for our next meeting, is building a collinear antenna for virtual radar.

See QST January 2014. http://www.arrl.org/files/file/QST/This%20Month%20in%20QST/January%202014/VirtualRadarJan2013QST.pdf ⤢



**Ready to begin wiring. Roll-up door on the left, side door to patio on the right.**



**Rough wiring done. The white conduit is for the antenna leads.**

**Drywall ready for texture.**


**Desk rough in.**


**Finished product.**

## How To Impress a Non-Ham With Your HT
### By Mike Dinelli, N9BOR

Remember when an HT and an autopatch would drop the jaw of an unsuspecting non-ham? You punched in a few DTMF tones, heard a dial tone and proceeded to call your XYL after a long day at the office. That, of course, was in the pre-cell phone/Internet era. Today it's called "wireless," a popular buzzword for the in-crowd, but we still like to call it radio.

Some people see the excitement of ham radio as a thing of the past. How do we convey our love of radio to curious kids and technically savvy adults? We certainly can't compete with cell phones, and perhaps we don't want to anyway. Amateur radio should remain a technical pursuit. We must demonstrate some knowledge before we are even allowed to call our first CQ. After we obtain our tickets, the learning should not stop. For the curious, ham radio is an ideal vehicle for lifelong learning in multiple disciplines.

Take your old 2-meter HT, punch in a few touch-tones and talk to a ham in Glasgow, Scotland. Instead of talking to the same guys every night on the local repeater, you could have Jimmy Khoo, 9W2HJ, from Malaysia stop by to say hello. Perhaps Kappy, W9CJ, is on his way to dinner in Florida and decides he wants to check-in with his buddies in Chicago on the MAC repeater. Is this possible? Yes, and it's really quite simple and inexpensive.

There are several systems available, but one that is growing in popularity is called EchoLink[1]. EchoLink is free software that allows Amateur Radio operators to communicate with each other over the Internet, using voice-over-IP (VoIP) technology. The program allows worldwide connections to be made between stations, from computer to station, or from computer to computer.

You don't even need a radio to talk to other hams on the air. You can do it with your computer and an Internet connection. I downloaded EchoLink from their website (1.8 MB), installed it on my hard drive and filled out the registration form. In about an hour, my registration was confirmed. It was manually processed to ensure my amateur radio license status. I start EchoLink and it displays a list of participants. Some are shown as repeaters, some are simplex links and others are just individual hams like me.
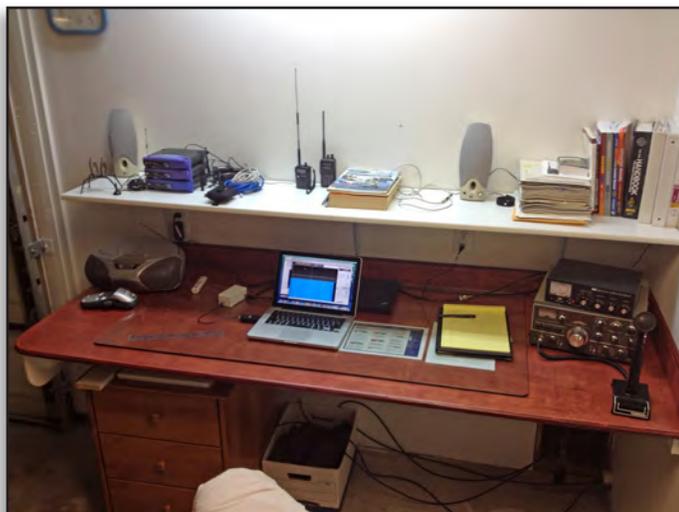
I scan through the list, see a repeater in New York and double-click on it. In about two seconds I hear "Go

1. http://www.echolink.org/

ahead N9BOR, this is WB2XXX." Now what do I do? I should have read the instructions! Again I hear my callsign coming from my computer speakers. "N9BOR, are you there? This is WB2XXX." A quick look at the Echolink screen and a mad rush to grab my $2.99 computer microphone and I'm in business. I say, "WB2XXX this is N9BOR, Mike in Chicago and I don't know what I'm doing. Can you hear me?" Al, a mobile in New York says, "Nice to meet you, Mike. You sound great!" Soon I'm in a roundtable with another mobile station and a ham on an HT in front of his house (in New York). The audio is crystal clear and I can't detect any delay or lost packets using my dial-up Internet account. I don't need an outdoor antenna or have to spend any money, yet I'm in Chicago and I'm talking to three hams in New York. Cool! This could even impress my 14-year old son.

To create a linked repeater, you need a simple interface, a boat anchor computer and an Internet connection. You can purchase an interface kit for less than $50.00[2]. Connections are made for audio in, audio out and push-to-talk. That's all the hardware you need to create an Internet linked repeater. Options are available to enhance operation (e.g. control receiver, compressor/ limiter).

So why aren't more repeaters taking advantage of this technology? Maybe we want to keep ham radio a secret. Or perhaps it's because of the gray area that links radio with the Internet. There is some debate by purists as whether this is really ham radio when you use wired (Internet) technologies to facilitate a QSO.

Imagine walking your dog and talking to a ham in England on your HT. A neighbor walks up and says, "What are you doing?" You say, "I'm talking to my friend, Nigel in Manchester, England. He says it's bloody cold, but he's on his way to a Rugby game anyway." This is how you impress a non-ham with your HT.

*Mike Dinelli, N9BOR, of Skokie, Illinois has been a ham since 1980. He is a volunteer staff member of the K9YA Telegraph (www.k9ya.org). His interests include boatanchors, contesting, DXing and CW ragchewing.*

*Reprinted by permission.* ✐

2. http://www.echolink.org/interfaces.htm

# FCC TO REINSTATE MORSE CODE TEST

"It was a big mistake eliminating the Morse Code test," admits FCC official

By Dan Romanchik, KB6NU

Washington, D.C. – April 1, 2014 - Today, the Federal Communications Commission (FCC) approved Report and Order 14-987af which reinstates the Morse Code test for General Class and Amateur Extra Class licensees. "It was a big mistake eliminating the Morse Code test," admits Dotty Dasher, the FCC's director of examinations. "We now realize that being able to send and receive Morse Code is an essential skill for radio amateurs. As they say, it really does get through when other modes can't."

Not only will new applicants have to take the test, but General Class licensees who have never passed a code test will have one year to pass a 5-wpm code test. Similarly, Amateur Extra class licensees that never passed a code test will have one year to pass a 13-wpm test. Those amateurs that fail to pass the test will face revocation of their operating privileges. Materials for administering the examinations will be distributed to Volunteer Examiner Coordinators by the end of April, so that they can begin the testing on May 1, 2014.

"This isn't going to be one of those silly multiple-choice type tests," noted Dasher. "We're going to be sending five-character random code groups, just like we did in the old days. And, applicants will have to prove that they can send, too, using a poorly adjusted straight key."

Technician Class licensees will not be required to take a Morse Code test, nor will a test be required for new applicants. "We discussed it," said Dasher, "but decided that since most Techs can't even figure out how to program their HTS, requiring them to learn Morse Code seemed like cruel and unusual punishment."

When asked what other actions we might see from the FCC, Dasher hinted that in the future applicants taking the written exam may be required to draw circuit diagrams, such as Colpitts oscillators and diode ring mixers, once again. "We're beginning to think that if an applicant passes an amateur radio license exam it should mean that he or she actually knows something," she said.

For further information, contact James X. Shorts, Assistant Liaison to the Deputy Chief of Public Relations for the FCC at (202) 555-1212 or jim.shorts@fcc.gov. For more news and information about the FCC, please visit www.fcc.gov. ✐

## ARRL Membership: Is 25% Asking Too Much?

By Dan Romanchik, KB6NU

In the March 2014 issue of QST, ARRL CEO Harold Kramer, WJ1B, makes a big deal of the fact that ARRL membership is now up to 162,200 members and is growing at a rate of about 1% per year. After patting the ARRL on the back about this, WJ1B launches into a discussion of the different programs that WJ1B feels have contributed to the membership growth.

Let's take another look at the numbers, though. As the editorial points out, 10,300 ARRL members are international members, meaning that 151,900 U.S. hams are ARRL members. Another article in the March issue, "New Licenses," notes that the total number of licensed radio amateurs at the end of 2013 was 717,201. If you do the math, you'll find that only slightly more than one in five licensed radio amateurs are ARRL members. I personally don't think that's so hot, and it's certainly not worthy of all the self-congratulation going on in this editorial.

The licensing article also points out that "the amateur radio population in the US grew by slightly more than 1 percent last year." That being the case, ARRL membership has grown at about the same rate. If all the programs noted in WJ1B's editorial were so effective, wouldn't you expect membership growth to be at least 2%?

I've said this before, and I'll say it again. I think the ARRL should set a goal to enroll at least 25% of licensed radio amateur as members. I think that this is achievable, and it seems to me that any group calling itself "the national organization for amateur radio" should have at least one in four amateur radio licensees as part of its membership.

What do you think? Is reaching 25% asking too much? If you think I'm right, please reach out to your ARRL division director and tell him so. More members would mean that the ARRL could deliver more services and have more clout in Washington. That sounds like a good thing to me. ⚡

## Ham Cram: Good for Amateur Radio or Not?

By Dan Romanchik, KB6NU

I've been teaching one-day Tech classes, often referred to as "ham cram" classes for several years now. As a result, a couple hundred people now have amateur radio licenses. I'm proud of that, but sometimes a doubt or

two creeps in. The doubts come from whether or not I'm teaching the students enough.

I also sometimes think about whether or not, my No-Nonsense study guides (www.kb6nu.com/tech-manual) should have more technical content. Recently on my blog (www.kb6nu.com), I've been posting sections of the next edition of my No-Nonsense, Technician Class License Study Guide. One comment reads,

*"Oh my, now I see why my beloved USA is falling behind in math/technology/university on the world stage. Lack of rigor brings down real world knowledge and this sad trend plagues our country at every level. Your book helps students pass the exam but not learn proper physics."*

The commenter is right about my study guides not trying to teach students about math or physics. There are many other books out there that do that. I disagree, though, that my study guides and my one-day classes are part of a "sad trend."

For one thing, an amateur radio license is not a degree in electrical engineering. Not only that, the Technician Class license is the very first rung on the amateur radio ladder. So, the question is how much knowledge should we require of someone just starting out in our hobby/service?

Secondly, I always stress that an amateur radio license is really a license to learn, and getting a Tech license is only the first step in a lifelong learning journey. I've been a ham a long time, and I'm constantly learning new things. And, I'm learning them because I have an amateur radio license. Without the privileges that my license gives me, I wouldn't be able to do the things I'm doing to learn them.

I sometimes regret that I can't teach people more during my one-day classes, but when you get right down to it, there's only so much you can expect. I know that a lot of my students have gone on to get General Class and Extra Class licenses and have turned in to great amateur radio operators. Presumably, they've learned a lot in the process.

Having said all that, I'm curious as to what you think about this? Are ham cram classes good for amateur radio? If not, what else should we be doing to help people get involved and enjoy amateur radio? ⚡

*When he's not teaching class, Dan, KB6NU enjoys working CW on the HF bands and building kits. For more information about his operating activities and his "No-Nonsense" series of amateur radio license study guides, go to KB6NU.Com or e-mail cwgeek@kb6nu.com.*

# SOBARS – K6QM

**ARRL Affiliate Club**

**South Bay Amateur Radio Society**
**P.O.Box 121132**
**Chula Vista CA 91912**
**Repeater: 146.085 MHz (+) 100.0**

## Field Day T-shirt order/worksheet

Shirt comes with standard Field Day ARRL logo on rear of shirt and standard SOBARS 3 line text to front of t-shirt over pocket area on left side of shirt.

☐   Add first name and call sign on right side of front on t-shirt.

First name: _____ Call sign: _____

Customer Name: _____

Either bring your own light colored shirt with you, or select one from the many available at the store. Cost is $15.00 plus cost of shirt, or add $3.00 to have name and call sign added for a total of $18.00 plus cost of shirt. Just come to:

### Tshirtmart
### 3171 Sports Arena Blvd.
### San Diego, CA 92110
### (619) 225-0005

Mention it is on the SOBARS 2014 & W6VMX files for reference.

**Questions?**
**Just ask one of**
**the club**
**officers**

**John T. Wright, K6CPO**
president@sobars.org
**Ramon Duenas, Jr., KJ6QQK**
vp@sobars.org
**Fred Curtis, KI6GRO**
secretary_treasurer@sobars.org

**ARRLFD14**
June 28-29
**HAM RADIO**
On the Air from Anywhere!

www.arrl.org