

SOCORRO AMATEUR RADIO ASSOCIATION

SARA NEWS

WWW.SOCORROARA.ORG

JANUARY 2018



MEETINGS

The minutes for meetings are at
www.socorroara.org/sara/minutes.

The agenda for meetings is located at:

www.socorroara.org/sara/agenda/agenda.pdf

The January meeting will be at the County Emergency Management Conference Room at 198 Neel Avenue on January 9, 2019.

CLUB OFFICERS

President: Prescott Grey W1PCG
Vice President: Brad Smith KD5JNI
Secretary: Ray Calkins, N0RBT
Treasurer: Bill Heller, KG5NGN
Past President: Jim Lommen KC7QY
ARES DEC /Director: Al Braun AC5BX
Newsletter Editor: Anneliese Bowman AD6UY
Suggestions or submissions: ad6uy@powerc.net

JANUARY PROGRAM

Dr. Matthew T. Heizler from New Mexico Tech will speak about New Mexico Tech's Argon Geochronology Lab, specifically about a new method for dating sedimentary rocks, implications for determining river incision mechanisms related to volcanism, tectonics, climate and mantle velocity structure."

SARA REPEATER

SARA supports a VHF repeater located on Socorro Peak immediately west of Socorro. The repeater is "open". The autopatch is currently inoperative.

146.68 (-)
100 or 123 Hz required
123 Hz on output

SARA also supports a UHF D-STAR module 'B' operating at 444.500 MHz + 5.000
Registration instructions are at
www.socorroara.org/sara/repeaters/D_STAR_Gateway.pdf

COMING EVENTS

Albuquerque Winter Tailgate
01/26/2019

Location: Stoneface Tavern
8201 San Pedro Drive NE
Albuquerque, NM 87101
Sponsor: 146.580 Simplex Group
Email: k5tee@arrl.net

2019 New Mexico TechFest
02/23/2019

Location: New Mexico Veterans' Memorial Event Center
1100 Louisiana Blvd. SE
Albuquerque, NM 87101
Website:
<https://www.rmham.org/wordpress/new-mexico-techfest/>

PRESIDENT'S CORNER, JANUARY 2019

Wow, it's New Year's Eve 2018 as I sit down to write the first President's Corner for 2019, and as the man said, "It's like déjà vu all over again!"

It's been a turbulent last year or two for SARA, and I think I can speak for the Club when I say we are saddened that our most recent President, Skyler Fennel, KG0SKY, made the decision to move to Colorado. We wish him well, and thank him for all of the amazing contributions he made to SARA, TARA, and Socorro in general.

I look back, and the last President's Corner I wrote was in May of 2010, where I spoke about looking forward to stepping down as a new slate of officers would soon be managing SARA. Thanks to recent action by your Executive board, that's why I'm nattering on here.

As you have read elsewhere Jim Lommen, KC7QY, was appointed as your current Past President. As for me, I didn't run fast enough. I thank the Board for their trust, and hope that all of our members continue to serve SARA as ably as always. To that end I believe my job is less to lead, and more to facilitate (and nudge; I'm good at nudging!). SARA is a great club, not because any of us you have trusted as officers have done particularly great things, but because the club, despite our various interests and differences, is very cohesive in its focus on what it means to be an ARRL affiliated club. I expect to continue to learn a lot from you all, and thank you for the support you have always given to SARA.

As always, we have lots of challenges maintaining a dynamic club environment with a group of volunteers. Over the next few meetings we need to prepare for Field Day, our Hamfest, QSO parties, maybe some other outside activities (BBQ contest, anyone?). I'm particularly interested in having more programs to raise general attendance and interest at our regular meetings. I'm also psyched at the idea of raising the technical content of Lab Night.

Speaking of technical content, do not miss the 2019 New Mexico TechFest, an ARRL-sanctioned specialty event, Saturday February 23, 2019 at the New Mexico Veterans' Memorial Event Center

located at 1100 Louisiana Blvd SE, Albuquerque, NM 87108. See <https://www.rmham.org/wordpress/new-mexico-techfest/>

Did I say outside activities? When I wrote that last "Corner", I mentioned "It must be Spring" ... how times have changed. Six degrees at my house this morning, snow and ice on the ground, and forecast of two major storms converging on top of us tonight and tomorrow, and lots of reports of frozen pipes. And people think it's weird that I have snowshoes on display in my library!

Enough for now; make lots of contacts and be well until the next meeting.

73, Prescott, W1PCG

HAM RADIO APPS FOR ANDROID A. BOWMAN, AD6UY

Now that you have your shiny new Android cell phone you might want to stick some ham radio apps on it. I don't use an iPhone so I'll beg my readers to supply information for that platform.

One of the the top rated apps on google Play Store is "US Amateur Radio Band Plan." It has ads and you can make in-app purchases. It is rated at 4.7 / 5 by 236 users. It's a 3.8 MB download and has over 10,000 installs.

<https://play.google.com/store/apps/details?id=com.kimbrelk.ham>

"Ham Radio Tools" according to its author: "Ham Radio Tools is a simple program that is to assist ham radio operators. Ham Radio Tools comes complete with a contact log and handy calculators and tables that will assist beginning ham operators and even the pros." I have seen nothing about in app purchases or ads. It has a 3.9 / 5 rating by users and has over 100,000 downloads; it's a small d/l at 2.5 MB.

<https://play.google.com/store/apps/details?id=chris.ham.radioTools>

"Ham Radio Podcasts Free" is a collection of podcasts about ham radio. You can stream content or

download for offline listening. This free version is free; there is a paid version with no ads. The download is 8.9 MB and there are over 5000 installs; 14 users rate it at 4.4 / 5.

<https://play.google.com/store/apps/details?id=com.andromo.dev5592.app509392>

“EchoLink” is free, it has over 100,000 installs and is rated at 4.4 / 5 by users. It requires a ham license and EchoLink password. You can access Echolink by a cell phone connection or wi-fi.

<https://play.google.com/store/apps/details?id=org.echolink.android>

“Ham Radio Tools” is not the same as the same-named app above. 203 reviewers give this 4.2 / 5 and there are over 50,000 installs. The download is 2.9 MB. According to the authors: “Enter a few pieces of information regarding your station setup and Ham Radio Tools can tell you your ERP and let you know if you are required by the FCC to do an RF evaluation.”

<https://play.google.com/store/apps/details?id=com.talixa.hamradiotools>

There are many more of these apps in the Google Play Store, most are free and some of those have ads. You can spend a fair lot of an afternoon there; go to the Play Store and search for ham radio.

<https://play.google.com/store/apps>

KICAD

RAY CALKINS, NORBT

What Is It?

KiCad is a free/open source software suite for electronic design automation (EDA). The program facilitates the design and exchange of schematics for electronic circuits as well as their conversion to PCB designs.

KiCad began development in 1992 by Jean-Pierre Charras. It is still being actively worked on by a number of programmers: improvements, refinements and additional features continue to be developed. The project funds a full-time professional developer through donations. It runs on Windows, Linux, BSD and MacOS.

It features an integrated environment for schematic capture and PCB layout design. Tools exist within the package to create a bill of materials, artwork, Gerber files, and 3D views of the PCB and its components.

Third party libraries have been developed to extend the functionality with Digikey provides compatible file descriptors for most of the parts it supplies.

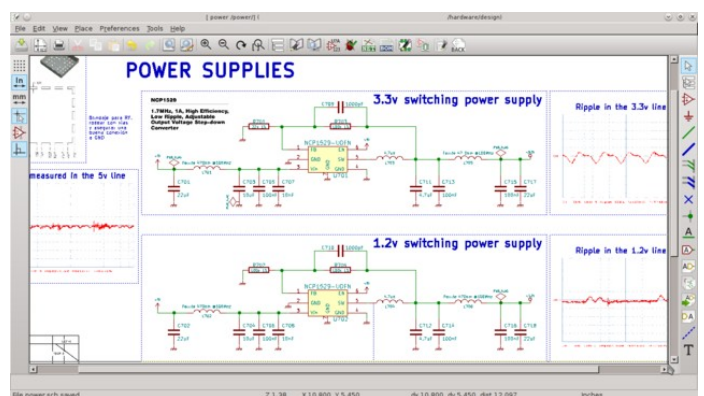
The official pronunciation: keyCad.

What does it do?

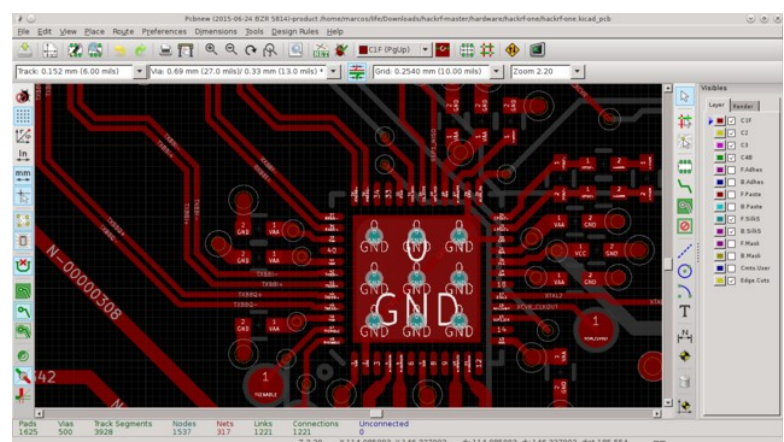
The KiCAD suite has five main parts:

KiCAD – the project manager.

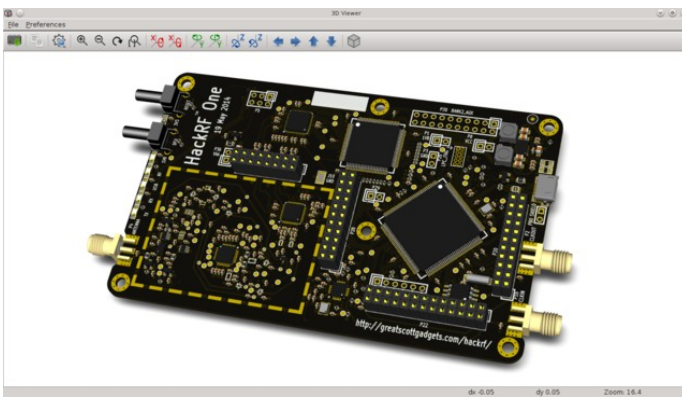
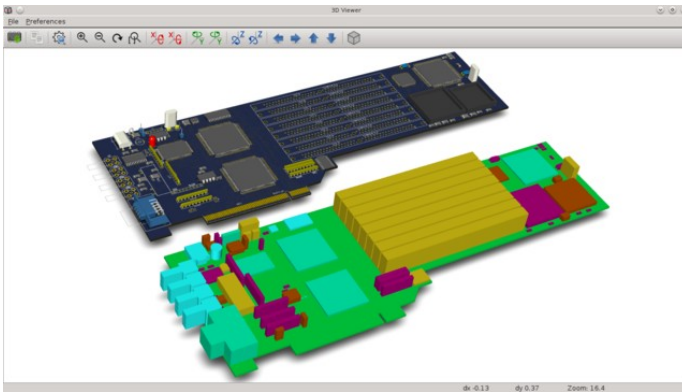
Eeschema – the schematic capture editor.



Pcbnew – the PCB layout program.



It also has a 3D view.



It supports up to 32 copper layers and 32 technical layers.

Dimensions are stored with nanometer precision in signed 32-bit integers making the theoretical maximal PCB dimension of approximately 2.14 meters.

Digikey and SparkFun provide KiCad library files for many of their products.

GerbView – the Gerber viewer.

The Gerber format is an open ASCII vector format for 2D binary images. Gerber is nearly universally used as the standard used by printed circuit board (PCB) industry software to describe the printed circuit board images: copper layers, solder mask, legend, etc.

Bitmap2Component – tool to convert images to footprints for PCB artwork.

How is it used?

Typical use would be to create a circuit in Eeschema, then use that to create a circuit board layout with Pcbnew, then export that to a Gerber file that is then sent to a board house for fabrication.

There are a lot of board fabrication houses that make high quality circuit boards very quickly for a very low price.

NutsNVolts magazine typically has ads for several board houses, Oshpark has often been mentioned. Some board houses even offer complete assembly and testing on small lots.

What are its limitations?

KiCAD does not perform circuit simulation or antenna radiation patterns; for that functionality, another package must be used.

How do I get it?

KiCAD download page:

<http://kicad-pcb.org/download/>

KiCAD documentation:

<http://kicad-pcb.org/help/documentation/>

Digikey components file:

<https://github.com/digikey/digikey-kicad-library/>

SparkFun components file:

<https://github.com/sparkfun/SparkFun-KiCad-Libraries>

Free analog, digital and mixed signal simulators:

https://en.wikipedia.org/wiki/List_of_free_electronic_s_circuit_simulators

EDITOR'S NOTE:

While you are using KiCAD you may need to know about the components. KiCAD has the pinouts but if you are not using it this little app may be helpful. It's "Electronic Component Pinouts Free" for Android on Google Play Store. It has a 4.6 / 5 rating by over 2000 users. It does not need internet access to work and has 23,000 distinct pinouts. There is an ad-free version which costs \$9.99.

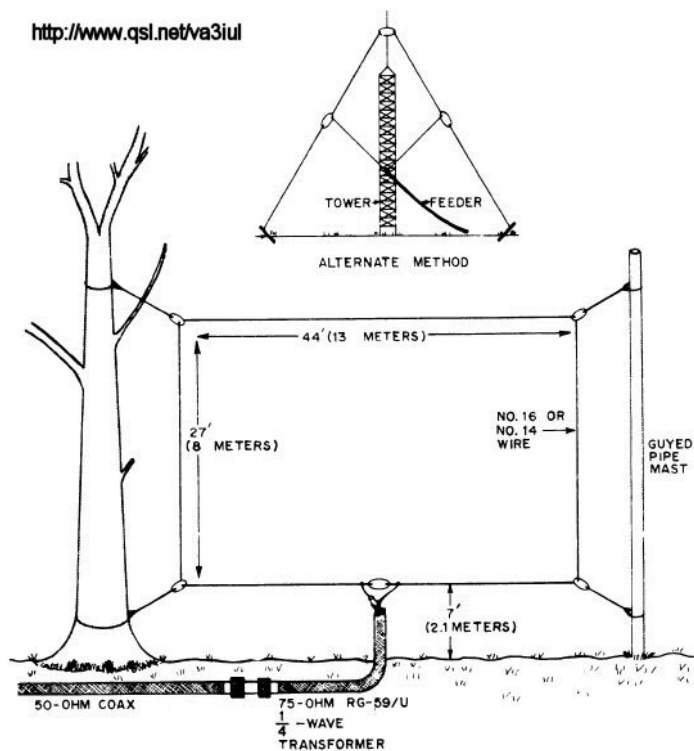
<https://play.google.com/store/apps/details?id=componentspinout.ammsoft.componentspinout>

287 DIFFERENT WIRE ANTENNAS

HENRY NEWTON, KC5WYA

I stumbled upon a PDF from Iulian Rosu, Y03DAC/VA3IUL that contains plans for 287 wire antennas. There is a good Table of Contents that is “clickable”. You can find an interesting title and jump to that particular article without scrolling the entire PDF that is 128 pages long. Generally there is just a sketch (see below). The approximately 31Mb PDF is located at:

<http://k3rrr.com/wp-content/uploads/2016/02/WireAntennasHamRadio.pdf>



COOKBOOKS!

Georgette Grey and Anne Bowman will be assembling a cookbook for a SARA fundraiser. Please send us your favorite recipes to share! They need not be original recipes, just ones that you like. Anne will be collecting them so send them to her: ad6uy@powerc.net. Could we get this assembled in time for the Hamfest?

SALES AND SWAPS

If you have items you no longer need or want we can list them in this newsletter. Send your information – what it is, if it works, how much you want, where to get it – to Anne Bowman ad6uy@powerc.net and it will appear here.