SCCARA-GRAM

Our 100th Anniversary!

Santa Clara County Amateur Radio Association

Volume 46, Number 2 February 2021

It is a typical crisp winter's day in San Jose, February 1921. A small but growing city of 40,000, already known for air flight and agriculture invention and innovation. It's the county seat of one of the most productive farm lands in the world. The fruit and nut orchards earned it the moniker "Valley of Heart's Delight."

San Jose is known for radio innovation too. Charles David "Doc" Herrold began experimenting with audio radio transmissions in 1909. In 1912 he was the first to make entertainment broadcasts on a regular schedule from his San Jose station. In 1921 he gets the first commercial broadcast license, KQW.

And San Jose has its share of Amateur Radio operators too, but there is no amateur radio club... *YET!*

That's about to change. Several young Amateur Radio enthusiasts have gathered for their *big meeting*. It's a modest affair, held in a barn on North 3rd St., but it has a feel of significance, a new beginning.

Everyone is ready for a new beginning too. Times have been rough. Just a couple of years ago the terrible flu pandemic ended, as did the great war. The war was especially tough since Congress ordered all amateur radio operators to cease operation. The order was lifted almost a year and half ago, October 1, 1919.

Much progress has been made lately. With these amazing new electron valves--some call them "tubes"--we can make fantastic receivers and transmitters! There's talk of issuing a challenge to U. K. amateurs to try making radio contacts from across the Atlantic. It will probably happen later this year (1921). The future looks bright indeed!

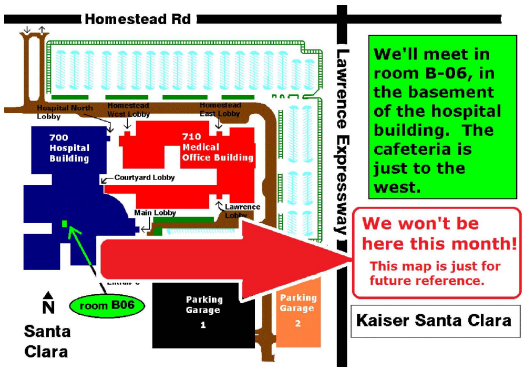
We're in the barn of Harry Engwicht 6HC. Perhaps it's no big surprise he was just elected our new club's first president.

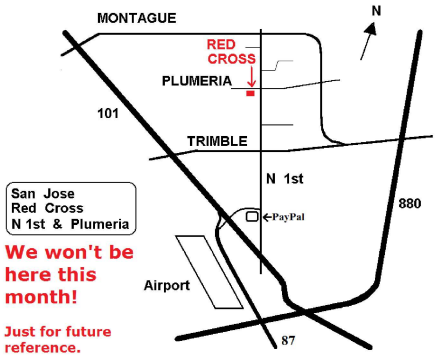
The meeting went well. And thus began the

San Jose Radio Club

Calendar

2/8 **SCCARA General Meeting** -- canceled
2/15 **SCCARA Board Meeting**: On our 2 m repeater after the net at 7:30 PM)
2/1-28 **SCCARA Special Event**





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
club email: w6uw@arrl.net or w6uw@sbcglobal.net

BOARD OF DIRECTORS
(officers are also directors)

President	Gregg Lane KF6FNA	408-393-5607
	e-mail: kf6fna@comcast.net	
Vice President	Ned Tufekcic AC6YY	408-690-7250
	e-mail: t94nt@hotmail.com	
Secretary	Barbara Britten, KD6QEI	408-293-3847
	e-mail: kd6qei@arrl.net	
Treasurer	Goetz Brandt, K6GKB	408-259-7287
	e-mail: goetz@ix.netcom.com	
Station Trustee	Don Village, K6PBQ	408-263-2789
	e-mail: donvillage7@yahoo.com	
Director	John Parks, W6JPP	
	e-mail: w6jpp@arrl.net	
Director	Lou Steirer, WA6QYS	408-241-7999
	e-mail: wa6qys@aol.com	
Director	Ben Shuford, KK6CCU	408-429-5370
	e-mail: bshu288519@aol.com	
Director	Wally Britten, KA6YMD	408-891-1105
	e-mail: ka6ymd@arrl.net	
Director	James Rustermier, KI6ZSK	408- 972-1689
	e-mail: rustermier@gmail.com	

COMMITTEES

Editor	Gary Mitchell, WB6YRU	408-269-2924
	e-mail: wb6yru@ix.netcom.com	
Repeater	Wally Britten, KA6YMD	408-891-1105
	e-mail: ka6ymd@arrl.net	
N0ARY BBS	Gary Mitchell, WB6YRU	408-269-2924
	e-mail: wb6yru@ix.netcom.com	
Webmaster	Wally Britten, KA6YMD	408-891-1105
	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

Harry's barn was a bit cold and drafty. Thanks to Frank Quement 6NX, our Monday evening meetings were later moved to his residence.

Time passed and the cub grew...

The national amateur organization "American Radio Relay League" formed in 1914, just a 8 years before we did. We applied for ARRL affiliation November 6, 1922. The San Jose Radio Club was declared an affiliate at the ARRL board meeting on February 26, 1923.

It was felt the club needed to be more inclusive of surrounding communities. We changed the organization's name to the **Santa Clara County Amateur Radio Association (SCCARA)** in 1925. The ARRL was notified November 9, 1925.

Things were going great. We have various activities. We hosted the 7th Annual Amateur Radio Convention, ARRL Pacific Division in October 1926. It was an impressive affair, held at the Vendome Hotel. Frank 6NX was president. A room at the San Jose Chamber of Commerce has become our headquarters. Earlier that same year we got the call sign 6SV for the club station, issued by the Dept. of commerce, Bureau of Navigation Radio Service.

In 1928 they changed Amateur call signs, we all went from 6xx to W6xx. So the club call became W6SV.

There were more activities and conventions... And then came another great war! And yet again Amateur Radio was shut down, this time from the early to mid 1940's. We started up again after the second world war ended and the radio restrictions were lifted. In January 1947 SCCARA became a corporation in the State of California. We lost our W6SV call sign during the shutdown and had to re-apply. Our new call is W6UW. (In 1949 Herrold's KQW broadcast station became KCBS AM, and it still is today.)

We were pretty enthusiastic after the 1940's shutdown. In 1951 we had a big BBQ and even invited our favorite movie star, Janet Leigh, with a giant post card. And MGM was good enough to send us a photo of her with it!

Not bad for an amateur radio club!

In the mid 1960's we got another call sign for our repeater, W6UU.

And the rest is history...

Here's to another 100 years!
73, Gary WB6YRU, Editor

SCCARA's 100th Anniversary Special Event Station

During the month of February we will celebrate our 100th anniversary with a special event station. Normally we'd use our club station at the Red Cross, but not this year due to covid-19.

We would like as many of our members as possible to operate from their home station using our club call W6UW. Operate both SSB and CW. QSL info will be on our SCCARA club web site (https://www.qsl.net/sccara/special.htm) and also listed in the Feb. QST magazine.

After the event please send me a copy (or print-out) of your log sheets so I can send out our QSL certificate:

Don Village, K6PBQ
3290 Woody Lane
San Jose, CA 95132-3544

This will be a great event for everyone to join in on.

73, Don Village K6PBQ.

SCCARA's special event station is listed in the ARRL QST magazine Page 82. Operating hours 1800z-2359z. Operating frequencies 21.320, 14.250, 7.250, 3.960. We may be on other bands if possible due to band conditions.

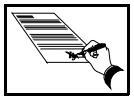
John Parks W6JPP

President's Prose

Survival. I hope you are well as you read this. We are going into our second year of covid 19, dealing with overwhelmed hospitals, school and business shut downs, masks and hand sanitizer. We've coped with red eyes and coughs due to hazardous air quality from fires that destroyed homes and forests. We have a new President, a damaged Capitol Building, and a second Impeachment for the same Trump.

Survival. SCCARA is celebrating its 100th. Anniversary during February 2021! We are sponsoring a Special Event Station using the club call W6UW. SCCARA members with HF capabilities are urged to contact Don Village K6PBQ if you would like to participate from your home station. Tune into the Monday night 2M SCCARA Net at 7:30 P.M. for an update on the Special Event Station. Till then, mask up and stay safe.

73, Gregg KF6FNA, kf6fna@comcast.net



On Our 100th Anniversary

Comments, Reminisces, and Observations by SCCARA Members

Don Village, K6PBQ:

SCCARA's 100th Anniversary

As SCCARA celebrate's its 100th anniversary of supporting Amateur Radio, I've been an active HAM Radio operator for 65 of those years. I got my license in 1955 before entering High School.

There has been a lot of changes over the years. One is our equipment. When I started in Amateur Radio you had to make a lot of your own homebrew equipment. There were a lot of receivers available, but not many transmitters. My first receiver was a Hallicrafters S20R. I had to build my own transmitter. I built a transmitter for the Novice bands using a new tube, the 61A6. Over the years I've had several receivers, the National NC88 and NC173. The Last receiver was the HQ170 from Hammarlund. In the early years Heathkit was a very popular kit manufacturer. I built the DX100 and used it for many years. I upgraded to the SB102 transceiver and I used it until I got my present rig, the Kenwood TS530SP.

I have always enjoyed Amateur Radio over the years. To really enjoy Amateur Radio you need to get on the air and make QSO's. Joining a radio club like SCCARA is a good way to meet other HAMs and enjoy club activities together.

73, Happy Hamming, Don Village K6PBQ

Eugene Hill, N6ANE:

Here is my story

My name and call first appeared on the SCCARA roster in 1978. Around that time there had been a lot of interest in a new Amateur Radio communication form: internet over radio, or Packet Radio AX.25. I was really interested in this. I was an electronics technician and a computer programmer and the technology really appealed to me. So in August of 1978 I went to San Francisco and took my license test. I managed to pass the code requirement. Then I bought a Heathkit HW2036 kit and built my first Amateur radio, modifying it as I built it. A Cushcraft Ringo Ranger went up on the roof. I was on the air!

I discovered W6UU repeater and its automated phone patch capability. I joined SCCARA so I could use the repeater with a clear conscience. I installed the HW2036 in my 1964 Corvair. Now I was on the air mobile, too.

I have been and still am a member of other public service Amateur Radio groups in the area. I have always liked SCCARA because of the guest speakers at club meetings. Sometimes the subject was of little relevance to me, and sometimes it was far beyond my ability to comprehend. But it was an opportunity to learn, and usually interesting. I learned about digital TV there, and solar chargers, and radio volunteer opportunities. It was interesting, and the speakers were available after the meeting for further information.

Some of the earlier members I clearly remember were Barbara and Wally Britten, and Virginia and Roy Metzger. They were and are an inspiration to me.

About the future of Amateur Radio: Our 100 year history

of Amateur Radio seems to me has had Radio Amateurs as the bridge between scientific discoveries, developing technology, and mechanical production capabilities as rich resources, and the curiosity and needs of the civic-minded individual to do something new and useful. We often took these new resources, developed and put them to new uses. Clever people could then make a useful consumer or defense product.

Eugene Hill
N6ANE

{Having been with the club since 1978, Eugene is now SCCARA's longest time member. -- Editor}

Goetz Brandt, K6GKB:

100 Year Anniversary

I have been trying to think back to 1920 and what it must have been like when the club was founded. A little history makes clear it was a very heady time. The world was recovering from the disastrous World War I, and the deadly Spanish Flu had mysteriously vanished from the planet. Oil was being discovered almost everywhere in the United States and replacing coal as the source of power. Agriculture was converting from animal power to tractors, horses being replaced by automobiles, mail being delivered by airplanes, air travel in its infancy, industry converting from steam power to electric power, homes being electrified, and verbal communication possible with electromagnetic radiations. The FCC had just lifted the World War I ban on civilian use of radio transmitters and the ham community was just getting back on the air. Imagine the excitement of forming a club of like minded radio enthusiasts who were on the doorstep of the great electronic revolution. Could they have possibly foretold that their club would still be active 100 years into the future? Well, it is and we the club members are on the threshold of the next 100 years.

When we look back and see all that happened during the first 100 years, we can only imagine what lies in store. If you had told the founders of our club that humans would be communicating with a probe that has left our solar system, you would loose all credibility. Well folks, you haven't seen anything yet, it is going to get a lot better and judging by the last 100 years, stupefying to say the least. So be a member, participate, and perpetuate this great club and the ham radio hobby it is founded on. Who knows where the club will call home in 100 years, maybe another planet, maybe another solar system. Until then, hope to see you at the next radio picnic in the park.

Goetz Brandt, K6GKB

Truman Lindsey, N6TRU:

Dear reader,

In March 2016, I was freshly licensed into the ham radio hobby. I had learned prior to being licensed of the SCCARA club, and thought it seemed intriguing. On my birthday that year, I was permitted to pick out a high quality radio at Ham Radio Outlet in Sunnyvale. I picked an Yaesu FT-60 and a couple accessories, then headed home to test out the contraption. I called out on the SCCARA repeater in the same format my study book had suggested, and I got a friendly response back. I joined SCCARA almost immediately after putting my first call forward as KM6AQS on the W6UU 2m repeater.

Under the wisdom of the members of the club, namely Don K6PBQ, Goetz K6GKB, and a bunch of others, I moved from nervous beginnings writing down the exact phrases I should say on the radio, to a fairly proficient operator, who, once I learned the ropes, had no need for the bountiful and procedural stacks of paper. (I recently looked through said papers, they were quite intriguing.) I also recall the Step-Out walk event, for which me and Gregg KF6FNA volunteered as a team. That was another wonderful, friendly event for which many of the club volunteered.

I am grateful for this club, and I will say it means something that we've lasted for all these one-hundred years. I enjoyed my two years as a Director, and I am anticipating and excited for the Secretary position effective on March 5th of this year.

Lastly, despite the current circumstances with the COVID-19 pandemic, I hope that, when it is permissible, we can reunite and celebrate our club's long life, and hope for a prosperous future as well.

A sincere 73 for now,
Truman N6TRU

Gary Mitchell, WB6YRU:

Then, Now, and the Future

First, a little confession: I joined in January 1990 and have been an active member ever since. But actually that's not *completely* true. I discovered SCCARA back in the late 1970's and was a member for a year (or was it two). Unfortunately work and school left little time for hobbies and I dropped out.

A decade later I saw an ad for SCCARA on a bulletin board at Quement Electronics. I thought "Oh yeah, I remember SCCARA!" I had a bunch of electronic goodies to donate to the club. I was referred to Frank McCormick AA6LL, our flea market chairman. And that's how I got involved in SCCARA... again.

Frank moved away in 1992 and I took over as the flea market chairman. The following year (March 1993) I became editor. A year after that (Sept. 1994) the board changed our flea market program from soliciting electronic donations and having a booth each month, to hosting it once per year. Hosting turned out to be less total work and we make at least as much money.

OK, back to circa 1978. Here are some very fond memories of meetings back then...

We met at the San Jose Red Cross on McKendrie Street, between Ruff Dr, and Spring St. Just like now, we had a club station at the Red Cross. But unlike now, we also held our general meetings there. (That building has since been torn down.)

There was one meeting where slow scan TV was demonstrated. Back then it was more primitive, CRT tubes were used with special slow phosphor that maintained the image for a minute or so before fading away. Our speaker had set up a way to store the image. The audio signal was recorded on audio tape. All he had to do was play back the audio into the video system. (Slow scan is REALLY slow, the scan lines are at audio frequencies for HF transmission.) But there's more!

His system could record and play back the image line by line in whatever order he wanted. That's where the fun began!

Now, keep in mind this was back in the 1970's. There was no digital processing, it was all analog. You really had to know electronics to build projects like this.

He recorded a slow scan image just received on HF and told the other guy he had a peculiar problem. He transmitted the recording back over the air. However, he played the first line last so the image was upside down. Naturally the other guy was dumbfounded--that shouldn't even be possible!

He had the guy send it again. Our speaker explained to us that he led the poor guy on, saying: "You did something, here

I'll play it back again." This time the image was played back *sideways*. Dead silence from the poor victim, who was persuaded to try yet again. And this time he was told: "Whatever you did, it's changed again. I'll send the recording back to you..." The image was now sideways the *other* way. More silence. Finally his victim swore he didn't change anything and how could this be happening?!

Finally our speaker said he took mercy on the guy and confessed to the whole thing. And his response was: "I don't care what it costs, I MUST have one of those things!"

It was a great story, I remember it well to this day.

At another meeting we had a demonstration of radio direction finding. The presenter had built a dual antenna rotated by a servo motor. (Remember, 1970's, mostly analog.) The two antennas were in phase to produce a null. After turning it on and keying up a nearby hand-held radio on low power, the antenna rotated by itself until the received signal was at a minimum (the null). A pointer on the dual antenna pointed in the direction of the transmitter. But it wasn't pointing in the right direction!

He explained that a 2 m signal will bounce off walls and conductors, and will be absorbed by wet things such as people. So it points at the dominant signal it receives, not necessarily where the transmitter truly is. He proved it by asking someone in the audience to stand up. One man in the front row stood up and sure enough, the antenna immediately rotated to a new bearing.

He also mentioned that this could be used as an intruder detector or burglar alarm, (referring to when the man stood up and the bearing changed). He didn't think something like that could be circumvented since it was based on the positions of things.

Well, I was impressed. Apparently so were the other meeting attendees. I was especially impressed with his servo driven antenna and what it must have taken to design and build it.

It was a different world back then, amateurs tended to be electronic experts. An advanced amateur license was something you'd include in a resumé. Most wouldn't hesitate to open a radio and change something. One could even build a tube radio that was as good as a commercially made radio. And you could do it with basic tools that we all had.

The 1970's was 50 years ago. This club started 50 years before that. In the 1920's amateurs were taken seriously as experts. There is evidence to that effect in some of the literature from those years. Amateurs were recruited during WW1 as already qualified radio operators and also in the commercial world.

New Big Thing

In 1921 electronic tubes (called "valves" then) were *the new big thing*, it revolutionized radio and made the modern world possible. For the first time we had ready made diodes, amplifiers, and mixers. Suddenly many circuits were relatively easy to build, some were nearly impossible just a few years previously.

Around the 1960's, transistors and then later the integrated circuit certainly were advancements, but they're not something fundamentally new. They're basically just smaller and more efficient versions of the same thing.

Now, 100 years later, we DO have "*the new big thing*." Something actually new and different, and I believe it's as revolutionary as the electronic tube.

Ever since radio began we did things with hardware components (resistors, capacitors, coils, active components, etc.) But now, computers are fast enough and capable enough to simulate those components and circuits in software.

We all know Ohm's law. And even if you're not immediately familiar with them, it's easy enough to look up the equations for a capacitor, a coil, etc. Indeed, we have CAD software that will simulate whatever circuit you design. It's just one tiny step further to digitize RF signals and send it through similar software.

When we learn about electronics we're often told to consider the *ideal* capacitor or coil. That's because actual components have details that complicate matters. Of course you have to consider those details to make a well designed circuit.

But in software, they all can be ideal components and circuits. That's especially helpful with filter design. Indeed, we now have so-called "software defined radios" that do exactly that, everything is simulated. The only hardware is a high-speed analog to digital converter to collect and digitize the RF signals. The rest of the receiver only exists in the mind of a computer. Transmitters are even easier.

So what's in store for amateur radio over the next 100 years?

Well, I see a time--not too far off--where it will be common place to build our own radios again, but all in software. We'll be software programmers instead of hardware designers. Your entire station can be in a single computer with whatever capabilities you want. Need something new? Just add or change the software.

That really is new and revolutionary--computers running fast enough to simulate hardware radios just as well or even better. And just like back in 1921, we're seeing this *"new big thing"* beginning now.

And then there's the internet... That really is different. Already there are software radios on-line that you can use from anywhere in the world with your web browser, as if you're there!

Capability like that makes me wonder: If we could be transported into the future 100 years hence, would we even recognize what they call radio? One thing seems certain: SCCARA members during our 200th anniversary will know a very different world.

And to those SCCARA members of 2121: "Hello from 2021! We've seen amazing changes since 1921. No doubt you will be able to say the same. I hope amateur radio in your world is just as interesting and fun!"

73, Gary WB6YRU

Treasurer's Treatise

2020 Year-end Financial Statement

Cash Flow

Income	
Club Badges	3.00
Club Dues (2019)	25.00
Club Dues (2020)	448.00
Club Dues (2021)	170.00
Total Income	1146.07
Expenses	
BBS	109.20
Equipment & Maint	1749.28
Insurance	200.00
Office Supplies	107.24
PO Box 106	130.00
SCCARA-GRAM	199.91
Total Expense	2995.70

Accounts

January 1, 2020:	13,234.13
December 31, 2020:	11,384.50
Net:	-1,849.63

Goetz Brandt, K6GKB, Treasurer

Hy-Gain Rotator

Ever since I let the world know that I can rebuild Hy-Gain antenna rotators I have been inundated with free corpses that no longer operate.

I love the challenge of trying to open up one of these beasts, the screws and bolts hopelessly corroded and locked tight. Liquid Wrench or its equivalent Blaster, both available in aerosol cans, can often loosen things up. Then again, drilling out the head of a bolt or cutting with a hack saw may be the only answer. Once inside the fun begins. There are 98 ball bearings that may or may not be trapped by keeper rings. You find out quickly when the ball bearings spread themselves out on the floor.

The last one I repaired was solidly full of corrosion and looked like it was filled with sawdust. The ball bearings were rusted and useless. The locking spade jammed tightly and not operable. Once the excess material was removed the cleaning began. Disassembling some of the major components helped a lot. Scraping out the severe corrosion can be a challenge but persistence pays off. Using the flat end of a 3/8 inch drill can be used to restore the bearing races which are made of aluminum. Buying a new set of ball bearings on EBAY as well as new keepers if missing can be all that is needed to get the rotator to turn smoothly. The rheostat at the top of the unit usually still works, but are available from MFJ. If the eight lug connector is not useable it also can be ordered from MFJ, but reattaching the more than eight wires will test your patience.

I like to use LPS3 to inhibit any future corrosion and apply it liberally to the entire inside of the unit. In fact, best not to look inside one of my rebuilds as things are pretty greasy inside. I use Liquid Zink in an aerosol can to pretty up the outside.

When reassembling the unit, alignment is critical and requires some logical thinking. The test is to hook up a controller and let the unit go to its extremes in either direction. The internal micro switches should stop the rotation and the pointer on the controller should be at the appropriate extreme also.

Can't tell you how satisfying it is to operate a rebuild that was previously inoperable and given up for dead.

Goetz Brandt, K6GKB

TH3 MK2

Some years ago Gregg KF6FNA and I went to the home of Howard Califf W6HOC who had just passed away. Howard was a regular behind the counter at HRO in Sunnyvale and a true friend to customers who could rely on his honest appraisals of equipment. When I bought a Comet multi-band vertical that required no radials he confided to me that it was possibly the best dummy load money could buy! He was absolutely right and I should have listened.

Greg and I were among the people allowed to rummage through Howard's back yard in hopes that we might remove some of the excess ham gear that needed a new home. Having recently acquired an abandoned TH6 Thunderbird antenna and having restored it, my urge to continue had me collecting all the aluminum I could get my hands on. So an enormous pile from Howard's yard has been sitting in my back yard exposed to the weather for five years now. That is until about a week ago when I suddenly had the urge to see what I had.

I knew from the start that it was all Hy-Gain components, so the sorting began. Using the downloadable manuals available on the internet, I was able to identify a complete TH3 MK2 Thunderbird Tri-band antenna. It had been dissembled into major subassemblies and using the labels on the traps and measuring the spacing of the components, I was able to verify a complete antenna. This antenna was made by Hy-Gain when they were still in Lincoln Nebraska and made to very high standards. The company eventually went through an ugly bankruptcy and the design now belongs to MFJ in Starkville Mississippi. Fascinating to see how MFJ was able to rename it the TH3 MK4, reduce the cost of materials and still maintain the electrical properties of this Yagi Antenna.

My project consisted of separating the tubes, cleaning the inside and outside of the mating surfaces, applying Noalox and reassembling. You have to select the type of operation you intend and create the exact spacing to achieve the resonance Phone or CW requires. It turns out that the previous spacing was for phone and I was simply repeating what the original owner had done. Once the three sets of elements where ready, I got the idea to test them out. I took each set, director, driven and reflector and laid their two halves end to end and connected them to my MFJ antenna analyzer. I even used a current balun to prevent current traveling down the outside of the coax. In each case I got the most spectacular 1+:1 matches at three different frequencies indicating that the traps were working perfectly. I couldn't make sense of the resonant frequencies I got, but then laid out on the porch just two feet above ground is not ideal.

The antenna will now go the John WL7SO in Fremont, Utah to whom I have promised it. John is building a garage which will house his ham shack and help support his 40 foot tower. I can't wait to see how this antenna works!

Goetz Brandt, K6GKB

ARRL News

From *The ARRL Letter*, Jan. 7, 2021

FCC Reduces Proposed Amateur Radio Application Fee to $35

The FCC has agreed with ARRL and other commenters that its proposed $50 fee for certain amateur radio applications was "too high to account for the minimal staff involvement in these applications." In a Report and Order (R&O), released on December 29, the FCC scaled back to $35 the fee for a new license application, a special temporary authority (STA) request, a rule waiver request, a license renewal application, and a vanity call sign application. All fees are per application. Administrative updates, such as a change of mailing or email address, are exempt.

ARRL had filed comments opposing the FCC's $50 fee and application fees and urged its members to follow suit.

As the FCC noted in its R&O, although some commenters supported the proposed $50 fee as reasonable and fair, "ARRL and many individual commenters argued that there was no cost-based justification for application fees in the Amateur Radio Service." The fee proposal was contained in a Notice of Proposed Rulemaking (NPRM) in MD Docket 20-270, which was adopted to implement portions of the "Repack Airwaves Yielding Better Access for Users of Modern Services Act" of 2018 -- the so-called "Ray Baum's Act."

"After reviewing the record, including the extensive comments filed by amateur radio licensees and based on our revised analysis of the cost of processing mostly automated processes discussed in our methodology section, we adopt a $35 application fee, a lower application fee than the Commission proposed in the NPRM for

personal licenses, in recognition of the fact that the application process is mostly automated," the FCC said in the R&O. "We adopt the proposal from the NPRM to assess no additional application fee for minor modifications or administrative updates, which also are highly automated."

The FCC turned away the arguments of some commenters that the FCC should exempt amateur radio licensees. The FCC stated that it had no authority to create an exemption "where none presently exists." The FCC also disagreed with those who argued that amateur radio licensees should be exempt from fees because of their public service contribution during emergencies and disasters.

"[W]e are very much aware of these laudable and important services amateur radio licensees provide to the American public," the FCC said, but noted that specific exemptions provided under Section 8 of the so-called "Ray Baum's Act" requiring the FCC to assess the fees do not apply to amateur radio personal licenses. "Emergency communications, for example, are voluntary and are not required by our rules," the FCC noted. "[W]hile the value of the amateur service to the public as a voluntary noncommercial communications service, particularly with respect to providing emergency communications, is one of the underlying principles of the amateur service, the amateur service is not an emergency radio service.'"

The Act requires that the FCC switch from a Congressionally mandated fee structure to a cost-based system of assessment. The FCC proposed application fees for a broad range of services that use the FCC's Universal Licensing System (ULS), including the Amateur Radio Service, which had been excluded previously. The 2018 statute excludes the Amateur Service from annual regulatory fees, but not from application fees.

The effective date of the fee schedule has not been established.

FCC to Require Email Address with Applications and on File

Effective on June 29, 2021, amateur radio licensees and candidates must provide the FCC with an email address on all applications. If no email address is included, the FCC may dismiss the application as "defective." On September 16, the FCC adopted a Report and Order (R&O) in WT Docket 19-212 on "Completing the Transition to Electronic Filing, Licenses and Authorizations, and Correspondence in the Wireless Radio Services," which appeared on December 29 in the Federal Register. The FCC has already begun strongly encouraging applicants to provide an email address and will email a link to an official electronic copy of the license once it's granted.

While many, if not most, amateurs already have provided an email to the FCC, this also will become a requirement. Under Section 97.21 of the new rules, as amended, the holder of a valid amateur radio station license "must apply to the FCC for a modification of the license grant as necessary to show the correct mailing and email address, licensee name, club name, license trustee name, or license custodian name." For a club or military recreation station license, the application must be presented in document form to a club station call sign administrator who must submit the information to the FCC in an electronic batch file.

Under new Section 97.23, as amended, each license must show the grantee's correct name, mailing address, and email address. "The email address must be an address where the grantee can receive electronic correspondence," the revised rule will state. "Revocation of the station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the grantee failed to provide the correct email address."

Licensees can log into the ULS License Manager System with their FRN and password to update their FCC license record, including adding an email address. For questions or password issues, call the CORES/FRN Help Line, (877) 480-3201 (Monday - Friday, 1300 - 2300 UTC) or reset the password on the FCC website.

From *The ARRL Letter*, Jan. 14, 2021

WSJT-X 2.4.0 to Introduce New Digital Protocol Q65

WSJT-X version 2.4.0 will introduce a new digital protocol called Q65, which, according to the Quick Start Guide, is designed for "minimal two-way QSOs over especially difficult propagation paths." The Guide said, "On paths with Doppler spread more than a few hertz, the weak-signal performance of Q65 is the best among all WSJT-X modes. Q65 is particularly effective for tropospheric scatter, ionospheric scatter, and EME on VHF and higher bands, as well as other types of fast-fading signals."

The new protocol uses 65-tone frequency-shift keying and builds on the demonstrated weak-signal strengths of QRA64, introduced in 2016. User messages and sequencing are identical to those in FT4, FT8, FST4, and MSK144. Q65 employs a "unique tone" to sync time and frequency. "As with JT65, this 'sync tone' is readily visible on the waterfall spectral display," the Guide said.

"Unlike JT65, synchronization and decoding are effective even when meteor pings or other short signal enhancements are present. Transmit/receive sequence lengths of 15, 30, 60, 120, and 300 seconds are available. According to the Guide, "Q65 will enable stations with a modest Yagi and 100 W or more and to work one another on 6 meters at distances up to ~1,600 kilometers at most times, in dead-band conditions."

Announcements:

The ebook, Capture the MAGIC of Six Meters, by Jim Wilson, K5ND, is available for free download. It covers propagation, equipment, software, antennas, awards, and contesting, as well as assistance in finding the magic, Wilson says.

Tom Roscoe, K8CX, has 149 "rare DX MP3 sound clips" on his www.hamgallery.com site. Some of the nearly 3,000 classic clips go back to the 1960s.

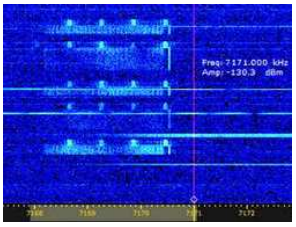
The 2021 AM Rally is set for the first weekend in February. The popular event takes place from 0000 UTC on Saturday, February 6 to 0700 UTC on Monday, February 8. The annual AM Rally operating event encourages all operators to explore amateur radio's original voice mode by showcasing the various types of amplitude modulation equipment in use today, ranging from early vacuum-tube radios to the latest SDR-based transceivers. "Participation in the AM Rally has continued to grow over the past 5 years, as more operators explore the mode," said Clark Burgard, N1BCG. "The AM Rally is a great way to beat the winter and COVID-19 blues." The AM Rally is open to all radio amateurs capable of operating on AM using any type of radio equipment from vintage to modern, vacuum tube to solid state. The AM Rally will use the 160-, 80-, 40-, 20-, 15-, 10-,

and 6-meter bands. "Those who have never tried AM mode will find plenty of help, if needed," Burgard assured. An AM Rally 2021 promotional video is available. Contact Burgard for more information.

New Amateur VLF Transatlantic Record Set Very low frequency (VLF) enthusiast Joe Craig, VO1NA, reports that Stefan Schaefer, DK7FC, copied his 50-character message transmitted from Newfoundland on 8.271 kHz, with a radiated power of 10 mW. "This is a new record for amateur transatlantic VLF," Craig told ARRL. "The mode used was EbNaut by Paul Nicholson. EbNaut is a synchronous coherent BPSK mode for use at VLF and LF. Craig's tower supports a VLF RL (rotated L) 10-meter (33 feet) average height and 100 meters (328 feet) long. VLF is the ITU designation for radio spectrum in the range of 3 - 30 kHz, corresponding to wavelengths from 100 to 10 kilometers, respectively. "Since VLF waves can penetrate at least 40 meters (131 feet) into saltwater, they are used for military communication with submarines," Craig noted.

From *The ARRL Letter*, Jan. 21, 2021

Madison DX Club President Bob Urban, W9EWZ, has announced that the presentation "**Understanding and Applying Solar Indices**," by Carl Luetzelschwab, K9LA, is available on the Madison DX Club YouTube channel.



Over-the-horizon radars (OTH-R) continue to clutter 40 and 20 meters. The International Amateur Radio Union Region 1 Monitoring Service (IARUMS) reports that OTH-Rs have increasingly been finding spectrum on 17 and 15 meters. "Above all, the Russian OTH-R 'Contayner,' as well as OTH-Rs from China affect amateur radio more and more, sometimes quite massively," said IARUMS newsletter Editor Peter Jost, HB9CET, said in the December edition, with three or four such signals showing in the same band. Significantly fewer FSK transmissions as well as the characteristic CIS12 signals from the Commonwealth of Independent States were to be found. "For some time now, a broadcast station is active every day at 1100 - 1258 UTC at 7200 kHz," Jost said, adding that the signal appears to be coming from Taiwan. "The broadcast station 'Voice of Broad Masses' from Eritrea can be heard daily on 7140 kHz (VOBM1) and increasingly also on 7180 kHz (VOBM2)," he added. Occasionally, better conditions during November 2020 revealed fishing buoy signals and an Iranian OTH-R on 10 meters. The Chinese OTH-R nicknamed "Foghorn" "was and is a daily troublemaker," Jost reported in November.

Meeting Minutes

General Meeting, Jan. 11, 2021

{meeting was canceled}

Board Meeting, Jan. 18, 2021

Held verbally on our 2 m repeater, W6UU/R.

Meeting called to order by President Gregg Lane KF6FNA at 7:36 PM.

Attendance:
President Gregg Lane KF6FNA; VP Ned Tufekcic AC6YY; Secretary Barbara Britten KD6QEI; Treasurer Goetz Brandt K6GKB; Station Trustee Don Village K6PBQ; Directors: Lou Steirer WA6QYS; Wally Britten KA6YMD, John Parks W6JPP, Ben Shuford, KK6CCU
Visitors: Editor Gary Mitchell WB6YRU, Janet KO6PUQ, Dan KN6MTF, Ed KN6KOZ
Truman Lindsey N6TRU. Paul KK6HWN.

President's Report, Gregg KF6FNA: Nothing new to report.

Vice President's Report, Ned AC6YY: Nothing new to report.

Secretary's Report, Barbara KD6QEI: The previous board meeting minutes were published in the SCCARA-GRAM. Approved by acclamation.
Gary WB6YRU: We have 48 members, only 10 have renewed so far. That's not so good. By now everyone should have renewed.

Treasurer's Report, Goetz K6GKB:
Checking = $ 11215.50, Cash = $ 216.04, Total = $11431.54

Trustee's Report, Don K6PBQ: Because of the pandemic, no activity at the club station.

Standing Committees

Repeater chairman's report, Wally KA6YMD: Repeater has some intermittent problem, feedback or an external signal, not sure what it is.

Webmaster's report, Wally KA6YMD: Nothing new to report.
John W6JPP: A station from Mantica has been coming into our machine.
Wally KA6YMD: it's on the same frequency, that's why you're hearing it.

Editor's report: Gary WB6YRU: I hope everyone saw the plea asking for contributions for our 100th anniversary edition, and will participate. So far I've only received two articles, one from Don K6PBQ and one from Eugene N6ANE (now our longest time member, joined in 1978).

BBS Sysop's report: Gary WB6YRU: Nothing new to report, the BBS is running normally.

Old Business:
100th QSL certificate, Gary WB6YRU:
Last time it seemed we were gravitating toward the design layout with small photos on either side of our call sign. I sent a few examples with variations on that design to the Board. It was also suggested that we use -pre-printed certificate paper. That will make the job easier and it will look excellent. I sent two examples of those, one with and one without a background pattern. Are we settled on this overall design and layout?
AC6YY, K6PBQ, KD6QEI, WA6QYS, KA6YMD, W6JPP, N6TRU: Yes. (No one against)
Gary WB6YRU: Are we agreed on using pre-printed certificate paper?
(No one against.)

Gary WB6YRU: And should it have a background of some kind? I favor having a background pattern.
K6PBQ and WA6QYS: pre-printed parchment pattern background.
KA6YMD: with background if not too distracting
(No one against)
Gary WB6YRU: Lastly, what do we want the images to be? My preference is to still have a "then and now" theme of some kind.
K6PBQ: two kinds of keys, or key and mic
AC6YY, KA6YMD, WA6QYS: two keys.
W6JPP: old and new key
N6TRU: oval shaped images with the theme, or just two keys
Gary WB6YRU: Now it's time for a first draft. I'll work on that.

Antennas at the Red Cross, Gregg KN6FNA: no activity with the antennas because of the pandemic.

Gregg KN6FNA: Special event station is coming up, how will we do that?
Don K6PBQ: I'll be the "club station" from home (because of the pandemic), all four Saturday's in February. After that, we can decide how many certificates to print. We will handle the mailing ourselves, no SASE requested.
Gregg KN6FNA: what bands frequencies?
John W6JPP: We should have 80 m, it's been active.
Ned AC6YY: what modes?
Don K6PBQ: mostly voice, some key.
Discussion followed on how to send the QSL certificate and to whom. Don K6PBQ will take care of it, he sends the regular QSL cards anyway.
Gary WB6YRU: We should have the frequencies and times listed in the newsletter.

New Business:
Gary WB6YRU: We have a vacant director seat. Any news?
Gregg KN6FNA: Rusty KI6ZSK said he would be willing to fill the vacant director seat. I hereby appoint Rusty KI6ZSK director.

Meeting adjourned 9:23 PM

Gary Mitchell, WB6YRU, recording for the Secretary

Packet Pieces

Downloaded from the BBS packet network:

==========
Date: 18 Jul 2010 01:25
From: W1GMF@W1GMF
To: HUMOR@USA
Subject: Dog License

During a county-wide effort to round up all unlicensed dogs, a patrolman signaled a car to pull over. The officer pointed to the big dog sitting on the seat and asked, "Does your dog have a license?"

The man said, "No, he doesn't need one."
"Yes, he does," answered the officer.
The driver said, "But I always do all the driving."

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 secretary).

Topics:
Antennas, feed-lines, tuners: **NV6W, W6JPP, K6PBQ**
CW (Morse code): **NV6W, K6PBQ**
DX (long distance, propagation): **NV6W**
EchoLink: **K6GKB**
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**

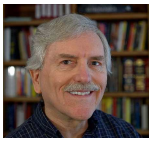
Contacts:
- K6GKB, Goetz Brandt, 408-259-7287
e-mail: goetz@ix.netcom.com
- NV6W, James D. Armstrong, Jr.,
evening & msg: 408-670-1680
- W6JPP, John Parks
e-mail: w6jpp@arrl.net
- K6PBQ, Don Village, 408-263-2789
e-mail: donvillage7@yahoo.com
- WA6QYS, Lou Steirer, 408-241-7999
e-mail: wa6qys@arrl.net
- WB6YRU, Gary Mitchell, 408-269-2924
packet: home BBS N0ARY
e-mail: wb6yru@ix.netcom.com

Newsletter Notes

For this special 100th anniversary edition, I originally thought of the lead article being some kind of narrative told as if this is February 1921. Much of it would describe what life was like at the time. Then Goetz K6GKB sent in his article. Hm, well, I believe they used to call that being scooped.

Goetz did a nice job, he described quite a bit. I didn't want to duplicate it too much, so instead I described the city and first broadcast radio station--which happened here. I hope that worked out OK. I only wish we knew more about the first meeting.

I was also hoping to get photos of members who contributed articles, the club officers, and perhaps a few others. Maybe we'll get some of those later this year. For now, at least one is better than none... maybe?



73, Gary WB6YRU, editor

This being our 100th anniversary, for our special event station it only seems proper that we should have an appropriate QSL. During 2021 we're going to have a QSL certificate instead of a card. It's still a work in progress. This is one of the many concept examples:

The original idea was to have a "then and now" theme. The photo on the left is from our 1925 film. It shows a couple of club members showing off the latest and greatest of that time. The one on the right is just a place-holder for the same kind of photo but with current members holding the latest and greatest of today. The images could be larger and printed as background. There are many certificates made with that sort of style.

However, the board eventually decided something a little simpler would be better. And the photos should be Morse keys on either side, or perhaps a key and a mic. Here are some examples:

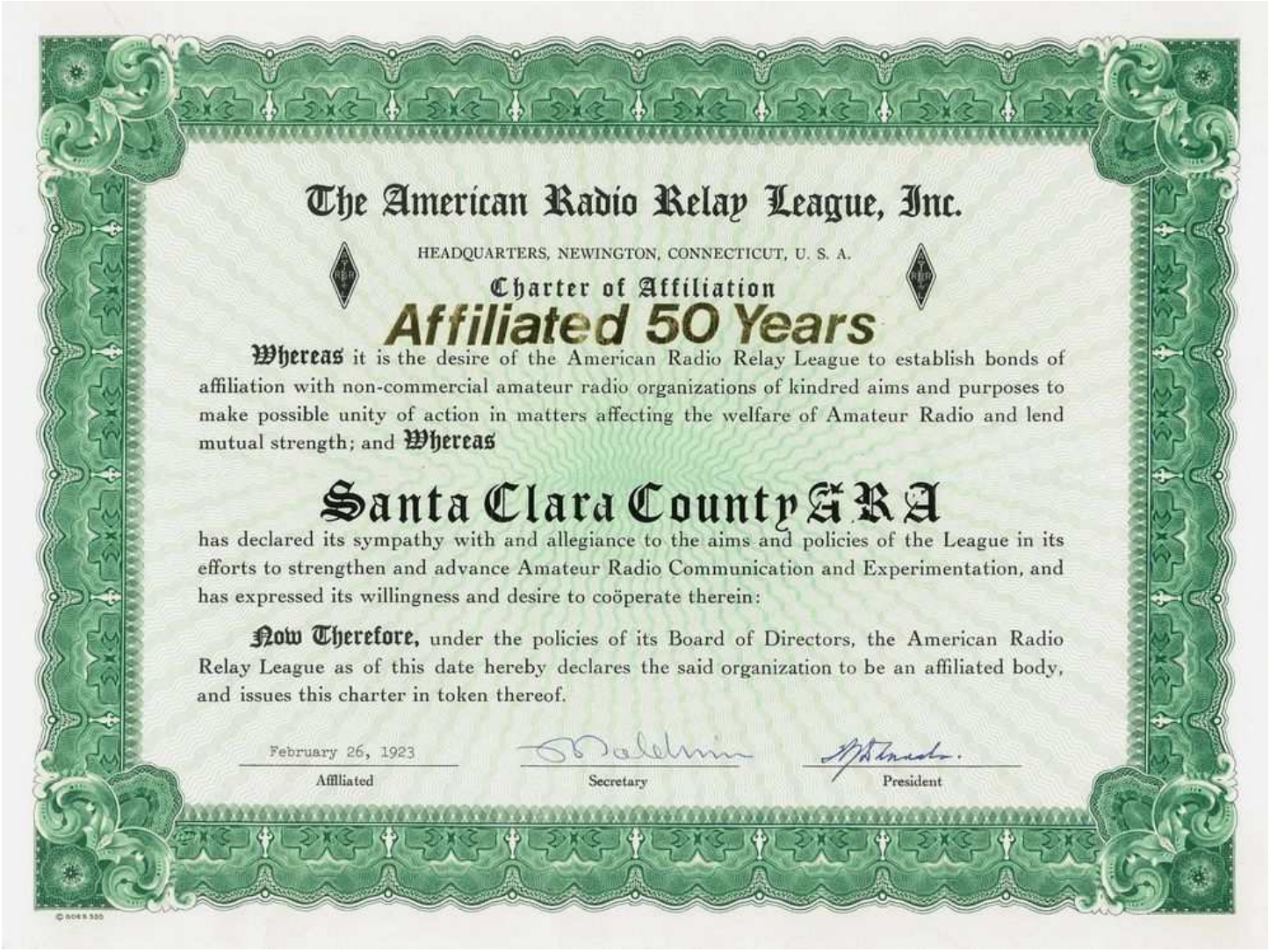
This is a key from the 1920's appropriately enough. An image like this could be on. the left.

Something like this could be on the right.

If the photo on the right is to be a key as well, perhaps in keeping with the "then and now" theme, a modern electronic key something like this.

Or the images on either side could be simpler yet, like some kind of sketch or graphic of keys. Again, this is still a work in progress. No final decision has been made, except for the basic layout design.

Also, we might make a similar looking Certificate of Participation for those club members who are part of our special event station.



The American Radio Relay League, Inc.

HEADQUARTERS, NEWINGTON, CONNECTICUT, U. S. A.

Charter of Affiliation

Affiliated 50 Years

Whereas it is the desire of the American Radio Relay League to establish bonds of affiliation with non-commercial amateur radio organizations of kindred aims and purposes to make possible unity of action in matters affecting the welfare of Amateur Radio and lend mutual strength; and **Whereas**

Santa Clara County ARA

has declared its sympathy with and allegiance to the aims and policies of the League in its efforts to strengthen and advance Amateur Radio Communication and Experimentation, and has expressed its willingness and desire to coöperate therein:

Now Therefore, under the policies of its Board of Directors, the American Radio Relay League as of this date hereby declares the said organization to be an affiliated body, and issues this charter in token thereof.

February 26, 1923 — Affiliated

Secretary

President

The original motivation for a QSL certificate came from this. The ARRL sent it to us recognizing our 50th year as an affiliated club.

The "Affiliated 50 Years" text is in reflective gold metallic ink. It looks better in person than it does in this scan. In our QSL certificate, the plan is to have the "100th Anniversary" text and the seal in the lower left corner be printed with similar gold metallic ink. The seal would just be the gold ink part – we have an actual embosser for making the impression. The seal image in the example was a scan of a gold sticker with the embosser used on it.

We plan to buy the certificate paper itself pre-printed. There's a lot to choose from. Some just have the scroll-work border, some include a background pattern. As you can see, this one has a background with a centered spray pattern. Some Board members have expressed a preference for some kind of parchment pattern for the background. We haven't decided anything yet beyond that.

So, this is just to give you an idea of what we've got in the works. The overall layout and the text likely will be very similar to what's shown here, but the rest is still up in the air. Stay tuned for more later. In the mean time, if you have a good idea of your own, let me know. I'll distribute your comments to the Board.

73, Gary WB6YRU

SCCARA
Santa **C**lara **C**ounty **A**mateur **R**adio **A**ssociation
PO Box 106
SAN JOSE CA 95103-0106

FIRST CLASS

ADDRESS SERVICE REQUESTED

SCCARA Membership Form for 2021

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: _____

on ly 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% For example: July would be $20 x (11-7) x 0.1 = $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 $15 per year**
(Prorated, $1.25 per month. That's $13.75 if starting in February, $12.50 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. 12/30/2020