



Bexar Wire

San Antonio Radio Club
W5SC



2020, No. 5

May 2020

The HQ-1 Mini Quad

Last newsletter the lead story was a summary of the presentation on Yagi antennas by Tom O'Brien, AB5XZ. This month I thought I'd write something to tag onto the end of the Yagi story.

As Tom pointed out, the basic Yagi design of driven element, director and reflector is used with antennas of various shapes and sizes. One such antenna was a compact hybrid quad called the Mini-Quad which was made and marketed by Mini Products, Incorporated. It was a two element beam with a driven element in front and a diamond-shaped reflector in the rear. The antenna had coils on the ends of both elements, tuned by way of spikes, called multiple hats by Mini Products that screwed into metal rings that separated the respective coils. Tuning was accomplished by trimming the length of one spike on each coil. The easy method was to wind a wire on the end of the spike with part sticking beyond the end of the spike, and trim it. Once trimmed, solder the wire to the spike.

It was advertised as a 4-band beam, 6, 10, 15, and 20 meters. The elements were 11 feet long, the boom was 5 feet long. The



Mini Quad could be mounted with TV antenna hardware and turned by an inexpensive TV rotator. It advertised a forward gain of 5.6 db and a front to back ratio of 12 to 17 db. Once set up and tuned, the SWR was about 1.5 to 1 across the phone portion of the respective frequency bands. I think 6 meters may have run 2:1. Power rating was 1200 watts at an impedance of 50 ohms. It was fed with one piece of coaxial cable and I remember I had a 1:1 Balun at the feedpoint. At least in my memory that is what mine was like. The cost in the 1980s was \$79.

Here is what a "New Product Bulletin" by Mini Products says about the antenna and its design: *"We believe our Model HQ-1 Hybrid to be the ultimate in a four band two element antenna. Incorporating the proven Mini Products Multiple Hat Loading Principle, plus a completely new approach to reflector design results in a unique super hi-performance radiating system."*

(Continued on page 6)

There will be an on-line meeting May 14 at 7PM via Zoom vice the usual meeting place due to Covid 19 social distance restrictions. See the President's Radiogram on Page 2 for instructions for joining the meeting.

SAN ANTONIO RADIO CLUB
PRESIDENT'S RADIOGRAM

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
5	R		N5YBG		San Antonio, TX		May

TO
 To W5SC

Hello fellow Amateur Radio Operators.

I hope everyone is in good health and practicing social distancing, the SARC continues to have club meetings online, Thursday May 14, 2020 at 7:00 pm. We will continue to use the Zoom application. You can download the app from Zoom website to your desktop, laptop, or tablet. You can also download it to your Smart phone or iPhone. If you don't wish to install the app, you can also call the phone # with the given meeting ID.

<https://zoom.us/download>

We will also conduct a Tech Talk Wednesday Elmer Session online at 10:00 am and share it with our members. On every Friday at 10:00 am we will conduct a Health Check, and Rag chew for 2 hours. Join us online and share with us your ongoing projects.

Please join us on Saturday May 16, the Hamvention QSO party sponsor by the World Wide Radio Operators Foundation, Inc. from 12 Zulu to 24 Zulu. On 10, 12, 15, 17, 20, 30, 40, 80, and 160. Your exchange will be 5-9 2020 if you have never attendant Hamvention. If you attendant Hamvention in 1981, your exchange would be 5-9 1981. Special club station to work W8BI


Contest University 2020 will held online free via Zoom all day on Thursday May 14th 8:45 am EDT go online to register now <https://www.contestuniversity.com/>

Good DX

Rosendo Guzman – N5YBG

Bexar Wire

Published monthly by:



The due date for articles is the **Monday** before the first **Thursday** of the month.

Rosendo Guzman N5YBG
 President, San Antonio Radio Club
 Jimmie Neff, WJ4M
 Editor
 210-563-2121
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Minutes, San Antonio Radio Club Meeting

7:00 p. m., April 09, 2020
Zoom Conference Meeting

President Call meeting to Order At 7:00 pm

Introductions by President Rosendo Guzman N5YBG

The primary purpose of the meeting is Raffle Tickets and Field Day

Approval of Minutes of the Last Meeting

Is there being no changes, additions, or deletions to the proposed agenda, it is approved as orders for the meeting without objection by unanimous consent

Officer Reports:

President

Appointments

Newsletter Editor: Jimmie Neff WJ4M

Webmaster: Bill Craft KD2HIQ

Education and Training: David Finell N7LRY

Emergency Communications: Joe Bruno, W5AUQ

Executive: Harold Fleischer AE5AS (By Constitution)

Finance and Review: Paul Guido N5IUT

Field Day: Joe Bruno W5AUQ

JOTA: John Douglas W5NZK

Membership: Bill Craft KD2HIQ

Nominating: inactive; no appointments.

Radio Fiesta: Bill Craft, Jeff Boyes, Joe Bruno, and Rosendo Guzman

VEC: Pat Knight AD5BR

Centennial and Scholarship: Tom O'Brien AB5XZ

Vice President Lloyd Swartz KF5ZHW – No Presentation

Secretary – Jack Bannin N5JLB Minutes posted on website.

Treasurer – Jeff Boyes, ND8B (Editor's note: Contact Jeff for details)

- CDs and savings accounts continue to earn interest no reported activity otherwise.
- Checking account was increased by deposits from Radio Fiesta. Payments from checking include:
- --Acquired prizes for the raffle: totaled \$4,173.76
- --Storage facility annual rent of \$300
- ■ Checking balance: \$1,676.47.

Newsletter Editor – Jimmie Neff reported The April 2020 Bexar Wire newsletter was sent out on April 07, 2020.

The deadline for each issue is the Monday before the first Thursday of the month.

Webmaster – Bill Craft, KD2HIQ, Website – Archived 2009 board meeting notes from Richard Elder and Archived 2010 Field Day presentation

Groups.IO updated membership, Mail chimp – Meeting notice, Twitter: Meeting notice

Facebook Statistics Pages From March 5 to April 1 Views 129 23% increase

Website Statistics - Sessions 771 -Down 58% vs. Previous 30 days. Page Views 1863 Down 57% vs Previous 30 days. New vs. Returning visitors – New 60% Returning 40% Device Break-down Desktop 64%, Tablet 3%, and Mobile 33%

Membership – Bill Craft, KD2HIQ as March 31, 2020 88 Paid members, 15 Free, 10 Family Members, 68 ARRL Members, a total of 113 members.

Chairman of the Board Report – Harold Fleischer, AE5AS No Report

Education and Training – David Finell N7LRY, No Report

Executive – Rosendo Guzman N5YBG – Raffle date moved to August 13,2020

Emergency Communications – Joe Bruno, W5AUQ No Report

Raffle – Raffle has been extended to August 13, 2020 at normal meeting, Covid 19 restrictions permitting

Field Day – Joe Bruno, W5AUQ, (not present) working on PC and Field Day 2020. ARRL is day-by-day and the club will follow ARRL guidance. If the site at Shavano Park is not available due to ongoing Covid 19 restrictions, the club will encourage members to participate on their own. Note that the club call cannot be used due to rule about having all transmitters within a defined radius, use individual call signs. Regardless, preparations will be made as if Field Day will go on as usual. Changes will be announced as necessary.

Finance and Review – Paul Guido N5IUT No Report

JOTA – John Douglas, W5NZK No Report

Silent Key Committee – New request from a person whose father died. SK committee has information but because of Covid 19 no direct action as yet. Photos have been taken, lots of equipment to include Collins equipment, Yaesu radios, and a shed full of amateur radio items that need to be disposed of. The man was 95 years old and had been a ham for 80 years! The family needs to sell the items to help pay expenses.

Radio Fiesta – No Report

VE Team – Pat Knight AD5BR - This is the April 2020 Bexar Wire report for the VE team, REVISED to reflect today’s new social distancing guidelines extension by President Trump.

Our next regular VE session WILL NOT BE be April 25. We hope to have our next regular session June 27 at 10 AM at the Great Northwest Library, 9050 Wellwood.

The library is closed due to COVID-19, and while we could have a very small group meet somewhere, we do not intend to have a test session until the current social distancing guidelines have been lifted.

If you want to test June 27, please pre-register so we know how to contact you. We will let you know when we know if our test location will be available. Those wanting to test sooner should go online and widen their search radius to see if there are locations testing where the Covid restrictions allow such gatherings.

Pre-register at hamtest@gmail.com

The Extra exam questions will change July 1, 2020, so go ahead and study to hopefully upgrade before then.

Logo Committee – Pat Knight AD5BR No Report

Centennial Commemoration (Temporary) - Tom O'Brien, AB5XZ – No Report

Scholarship Committee – Tom O'Brien AB5XZ - No Report

Old Business (Motions carried over from previous meetings) - None

New Business (Must be presented as a motion) - None

Announcements for The Good of Amateur Radio

Meeting Adjournment 7:19 PM



Volunteer Examiners at Work



This is the May 2020 Bexar Wire report for the VE team.

We did not have a VE session in April due to the library being closed and other COVID-19 restrictions. We hope to have our next regular session June 27 at 10 AM at the Great Northwest Library, 9050 Wellwood.

The ARRL/VEC is allowing limited remote VE sessions, with only a single candidate taking a single test per session. We usually have twelve or more candidates per session, so that means we would spend likely eighteen hours or more to administer an exams to the same number of candidates. We hope that will not be necessary and that in-person testing can resume by June.

If you want to test June 27, please pre-register so we know how to contact you. We will let you know when we know if our test location will be available.

Pre-register at hamtest@gmail.com

The Extra exam questions will change July 1, 2020, so go ahead and study to hopefully upgrade before then.

73,

Pat Knight AD5BR

210-273-5927 iPhone

HQ-1 Mini Quad (Continued from page 1)

Our principle of loading contains no magic whatsoever. We simply reduce the element length by eliminating the least useful portion, the ends, and retain the center which is the primary current or radiating portion. That plus our new super Hi-Q Reflector, diamond shaped for maximum signal capture, and properly phased, puts all your signal out front where it does the most good.

When I was first licensed in 1979 I lived in a housing area in Northern Virginia with very restrictive covenants and a very aggressive homeowner’s association. They did allow TV antennas on the roof however. My first radio was a used Yaesu FT101EE. With the purchase was a Mosely TA-33 Junior beam. There was no way the association would let me put that up. My yard backed up to a green area with trees that were about 50-80 feet tall. I had plenty of room to hang wire antennas and I had several, including a multi-band trapped antenna about a hundred feet long and a 40-meter loop hung in the tall trees. When I achieved my advanced license, I searched around for some kind of steerable antenna. I settled on the HQ-1 Mini-Quad. On the advice of my neighborhood association representative I applied for permission to put up a “TV/Ham radio antenna.” It wasn’t a stretch, the 6-meter part of the antenna could be used to tune in VHF TV signals of the day. My application was approved! So I installed a TV tripod mast on the roof of our 2-story duplex, an Alliance HD-73 rotator and the HQ-1 Mini-Quad. I also stuck a 2-meter J-Pole antenna on the mast that supported the Mini-Quad. The sun spots were plentiful, the bands were so open I could work SV1AA in Athens on 15 meter CW using ³/₄ of a watt with a Heath HW-8 QRP rig. With the Mini-Quad I was in the big-time!

The antenna seemed to receive equally well off the front and the back. It had some rejection off the sides of the beam, but I remember being able to talk to folks as if it

transmitted equally off the front and back. It was directional compared to the wire antennas and so was an improvement.

The coil supports were made of some kind of ceramic and it was brittle. I looked up one day and saw half of one of the coils dangling by a wire. A clumsy bird could do damage and I guessed that is what happened. I took the coil down to the shop and glued it back together with a piece of dowel rod to reinforce it. I used it another few years with no problem, and no more fat, clumsy birds.

The antenna was unusual enough that if you contacted another person using one, you exchanged “war stories” about it. I remember discussing the antenna with K2ORS, Jean Shepherd. He was a famous broadcaster, humorist and writer who had done a lot of work on radio. He also wrote for Playboy at the time (he told me). According to Wikipedia, he was known for the film “A Christmas Story” that came out in 1983 which he co-wrote and narrated. Jean was at his mountain home in New York and had an HQ-1 on the roof of his cabin. I was not familiar with him at the time, but we had a good QSO and I remember discussing the Mini-Quad with him. Jean died in 1999.

One other weakness of the antenna was the non-conducting “T” frame that held the metal diamond portion of the reflector. It was made of some kind of plastic. Mine held up well. Before I left Virginia to move to San Antonio, a club member gave me a box of spare “spikes” and somewhere I bought or was given parts for another Mini-Quad. I had a spare set of coils and parts to the driven element and the diamond, but the plastic pieces had deteriorated and were broken. I think a bit of PVC pipe would have replaced those parts, but I had no reason to build a second HQ-1.

So there you have it, one of the stranger applications of the multi-element antenna design pioneered by Mr. Yagi. A bit after the HQ-1 went out of production, the Butternut Company marketed a 2-element, miniature 5-band beam, the "Butterfly Beam." That consisted of two bowtie-shaped elements tuned so it could be used as a directional antenna. It was not much larger than the Mini-Quad. That I know of the Mini-Quad

was one of the first, or the first, successful reduced-size HF beam antennas. I still have mine hanging in the garage. I think I know where all the parts are, but alas, I'm not allowed an antenna on my roof in this housing area. Interestingly the covenants do allow me to have a small tower, but I don't have one yet.

--Jim Neff, WJ4M

Silent Key Web Site Page

From web master, Bill Craft, KD2HIQ

The web site now has a silent key page [<https://w5sc.org/silent-key/>] that provides information about thinking ahead and providing forms to document what you have.

SARC does not directly buy any SK equipment, we provide a service to help loved ones dispose of equipment. The service consists of information, consulting and possibly disposal of equipment by donation.

We encourage you to plan ahead and make those hard decisions ahead of time so those who are left don't end up dumping your equipment in the trash. Not everyone plans ahead, most us try to ignore the fact that at some point our health may fail or we may be called to meet our maker.

The goal is to help fellow hams and their families deal with this in their time of need. They do not have to be members of SARC for us to help. We offer our services to the ham community to benefit other hams and their families.

The committee can be reached by emailing SilentKey@w5sc.org

Groups.io

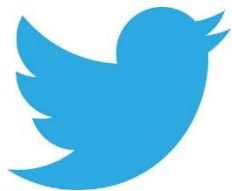


SARC has had a Groups.io. Its name is saradioclub.

The saradioclub Group.io is being used to publicize SARC business meetings. It can be used for other things like promotion of VEC testing and classes. Members of the saradioclub Group.io can and have asked each other technical questions or sought assistance.

The saradioclub Group.io is a closed group. To become a member, go to saradioclub.groups.io. (You may need to have a Groups.io account.) You will then need to select *Apply for membership in this group*. This generates a message. SARC members can expect approval to join the saradioclub Group.io in probably less than 24 hours.

SARC Tweets



Reminder: there are two active Twitter accounts for the San Antonio Radio Club. They are @SARadioClub and @ARadioFiesta.

The @SARadioClub is being used to publicize SARC meetings. It can be used for other things like promotion of VEC testing and classes.

When work again commences the @ARadioFiesta will be used for the January, 2021 Radio Fiesta.

SARC members are encouraged to follow both Twitter accounts.

SARC Facebook



There is a San Antonio Radio Club – SARC (@saradioclub) Facebook Page.

The newsletter editor is making posts about SARC meetings and other activities. Any Officer, Committee Chairperson, or member who believes that they have information that should be posted to this page should contact the newsletter editor using the contact information for the newsletter editor on page 2 of this newsletter.

SARC members are encouraged to follow this Facebook Page

SARC SLACK



There is a San Antonio Radio Club Slack team – w5sc.slack.com.

Slack teams are meant to foster communication between team members. Paul Guido, N5IUT, has established the w5sc.slack.com team for SARC. He has also established some channels. Think of the channels as topical areas.

To join send an email to Paul Guido, N5IUT, at radioteacher@gmail.com. In actuality, any team member already a part of the w5sc.slack.com can invite

SARC has a website:
w5sc.org
Webmaster: Bill Craft KD2HIQ
Billc851@gmail.com
210-233-8863

Amateur Radio License Classes
Multiple classes planned for 2019.
For more information, contact:
David Finell, N7LRY
Instructor

you, but Paul is known to be on it.

SARC Meeting Dates for 2020
January 9, 2020
February 13, 2020
March 12, 2020
April 9, 2020 Cancelled, Zoom meeting on line instead at 7 PM. Check E-mail
May 14, 2020 Via Zoom on-line.
June 11, 2020
July 9, 2020
August 13, 2020
September 10, 2020
October 8, 2020
November 12, 2020
December - No meeting
Meetings are held at Blanco BBQ, 13259 Blanco Rd, San Antonio, TX 78216 at 7:00 p. m. Room is available at 6:00 p. m. for supper.
Come early and eat with other members

License Testing Dates for 2020
February 22, 2020
April 25, 2020 Cancelled
June 27, 2020
August 22, 2020
October 24, 2020
Times and locations along with required document information can be found on SARC's website.
SARC does all of its licensing testing as a part of ARRL Volunteer Examiner Coordinator (VEC) organization so all of the Volunteer Examiners in SARC are duly authorized Volunteer Examiners of ARRL's VEC.

Emergency

Radio Fiesta 2021
January, 2021
To be announced
See website w5sc.org for more information

Field Day 2020
(Covid restrictions permitting)
Setup: Friday, June 26, 2020
Operations: Saturday, June 27, 2020 & Sunday, June 28, 2020
Where SARC proves they are an eating group with a radio problem.
More information to follow, but hold these dates.