

THE NEWSLETTER OF THE KINGS COUNTY RADIO CLUB

KCRC



January 2021

“NULLUM BENEFICIUM IMPUNITUM”

Volume 8, Issue 1

Minutes of the January 6th 2021 KCRC Meeting

Our January “Pre-Meeting Question and Answer Session” tabled for WebEx small talk.

The monthly meeting was called to order at 8 PM, by our President, Joseph AC2AE. Also present at tonight’s meeting were Vice President Mitch N2RGA, Treasurer Frank KD2QPU, Secretary Roy AC2GS, Executive-At-Large Board Members Jason KD2LRX, and Berlotte KD2MYF, Howard N2GOT, Richard KA2KDQ, William AC2ZV, Howie KD2MSU, Bob KD2NVB, Glenn N4ESU, Nick N2HVR, and Cris KD2UCI.

The vote to accept the minutes of the December meeting was passed unanimously.

Treasurer Report—Frank KD2QPU reported that our Treasury currently has \$2,471.70 in our bank account as well as \$515.99 in our PayPal account for a total of \$2,987.70 in assets.

Repeater status was discussed by Joseph AC2AE and Mitch N2RGA - The voice announcements still need to be optimized for the controller’s speech synthesis circuits—this is planned for the next routine maintenance visit to the repeater site. Thanks to a donation of AMBE dongles from Jason KD2LRX, we will soon have additional gateways to our Repeater—via Quadnet AND TGIF Networks, via Talkgroup #369. When these talkgroups are established, instructions for accessing Quadnet and TGIF via Hotspots will be made available.

2 Meter Net Report—Glenn N4ESU reported consistent activity on the Net. Of 7-10 check-ins, weekly.

10 Meter Report—Roy AC2GS reported that the 10 Meter Net is doing well, with mostly local check-ins, and has been going on from 11 AM to approximately 1 PM each Sunday.

KCRC TechNet—Roy AC2GS reported that the TechNet is alive and well, BUT that it suffers from little participation at the very beginning of each Net. We still need people to join in with either questions, topics, or their own observations., preferably at the beginning of the Net.

Fusion Net Report—Jason KD2LRX reported that the FusionNet had 31 check-ins during the holiday episode of the FusionNet.

Old Business: There is no new information, regarding our VE Sessions. For the time being we are referring interested parties to the Columbia University VE testing site. We continue to investigate alternative options for our own VE Sessions. An attempt was made to cross promote the KCARES VE sessions, but the VE team leader has failed to respond to two email requests.

We have 87 members on our Roster. Thirty-three members are paid up for 2021 (38%) and seven members are paid up until the end of 2023.

We are still selling Club patches at \$5 a piece and \$1 shipping and handling. You can save the shipping and handling fee by buying them at our monthly meetings (when they are re-established).

We discussed options for a place for regular meetings after social distancing measures could be eliminated. No new options have presented themselves at this time.

There was one nomination for President of the Club for 2021—Glenn N4ESU, who will have been a member in good standing for one year, by next month's elections. No one was nominated for Vice President, but it is hoped that someone will decide to run before our next General Meeting in February, when elections will be held.

New Business:

Mitch N2RGA checked into this General meeting from his hospital bed, while recovering from Covid-19. We all wished Mitch a speedy recovery!

Stay Safe Everyone!

Disclaimer: The views and opinions expressed in this publication are those of the author and do not necessarily reflect the official policies or positions of the Kings County Radio Club, its Executive Board, nor its General Membership.

These minutes were respectfully recorded and submitted by Roy AC2GS on this day, January 6th, in the two thousandth and twenty-first year of our Lord of Propagation.



The Kings County Radio Club is at www.KC2RC.com or www.KingsCountyRadioClub.com
KCRC is an ARRL affiliated club (see: www.ARRL.org)

What's Inside Those Darn Rubber Ducky's, Anyway?



First off, that isn't the 'Rubber Ducky' that I had in mind. I meant the Rubber Ducky Antenna, which is often found on many Ham's Handy-Talkies (HT):



I am always a sucker for the origin of words, but with our little rubber ducky antennas, it is still a bit of a mystery. There are some stories that it originated at the White House in the early 1960's. As the story goes, Secret Service Agents protecting the First Family selected these shortened antennas for their Handy-Talkies. John F. Kennedy's daughter Caroline, who was four or five years old at the time, is said to have called these bouncy objects at the top of Agent's radios 'Rubber Duckies'!

Another story is that it came about due to a comedic bit on an extremely popular comedy album, 'The First Family,' where Vaughn Meader held a mock News Conference for White House Personnel, identifying the family toys and mentioned that 'the Rubber Ducky is MINE.' I find this dubious because the punchline was not 'the Rubber Duckie is MINE'; it was "the Rubber Schwann (Swan) is MINE." We don't call our antennas 'Rubber Swans', so I doubt this story is true.

A rubber ducky antenna, or its shorter brother, the stubby antenna, is just an electrically short monopole antenna that is much easier to work with rather than quarter-wave whip antennas, otherwise used.

Ordinarily, an electrically shortened monopole would have too much extra capacitance to be an effective antenna

UNLESS it was coiled into a narrow helix of springy wire, whose inductance would cancel out a shortened antenna's inherent capacitance. The rubber ducky is just a normal-mode helical antenna, covered in rubber or plastic!

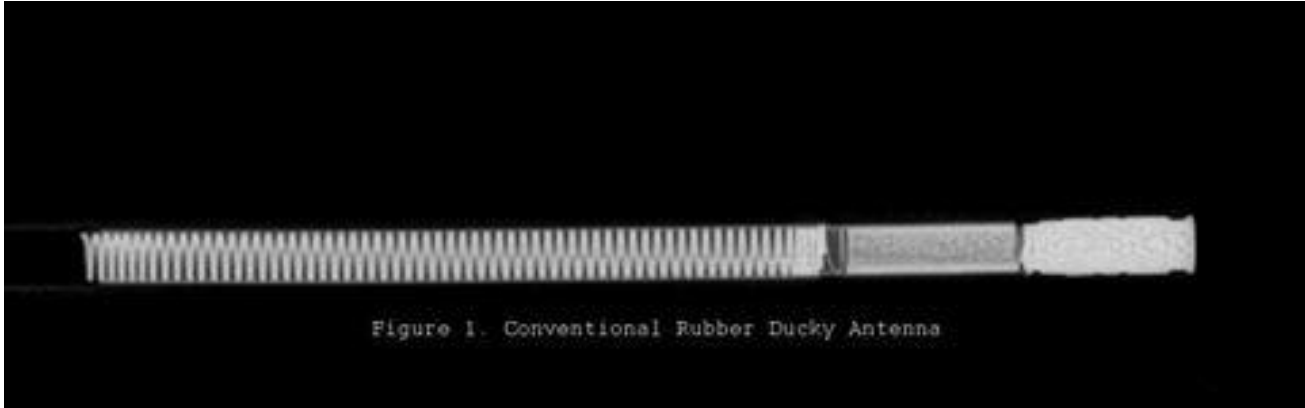


Figure 1. Conventional Rubber Ducky Antenna

They are usually 16% to 60% of the length of the quarter-wave whips that they replace.

Although the conductor is a helical coil, it is a very narrowly coiled radiator to keep its 'Q' low and its bandwidth wide, and it produces a linearly polarized radio wave in the orientation of the rubber ducky itself.

They offer significantly 'less gain,' otherwise known as 'more losses,' than quarter wave whips, but make up for this by the sheer convenience of carrying it without hearing someone's mother threatening:

"You'll poke ya eye out with that thing!"

Even the well-performing quarter-wave whip has its problems when used with handy-talkies. To perform optimally, the quarter-wave whip requires a counterpoise – much like the radials seen on quarter-wave vertical antennas. When it comes to handy talkies, there is no room for radials or even a proper counterpoise. But never fear, the manufacturers have included a counterpoise into their design – YOU! Your hand, arm, and your body, in general, operate as your own handy-talky's counterpoise. This is obviously not the best design possible. Different people in different positions offer different kinds of counterpoises – your mileage might vary. What about when people, wary of catching too much RF, place their HT away from their body? Well then, any wire used for their wired microphone and the hand holding it will offer your HT a route to another functional counterpoise...

HTs just are designed to deal with the counterpoise that they are stuck with. Optimum, or, more than usual, not very 'optimum'!

Every so often, someone will try to test a rubber ducky antenna on a VNA/Antenna Analyzer and be upset with the results. Sometimes this is just from not factoring in a similar counterpoise that the HT and their user offer, but sometimes it is just that rubber duckies can be decidedly awful antenna resonators. Since most HT operations are not long-distance, this is not as important as it would seem.

Well, that's the story for 2 meter and 70 cm HT rubber duckies. There are rubber duckies for shorter wavelengths, but often they are rubber duckies in name only. Their nonconductive spring is not for radiating RF but just used for support, and other conductive elements are hidden under the rubber/plastic that offers a more efficient radiation of higher frequency RF signals.

Vy 73,

Roy AC2GS