
SIGNALS

Rockwell Collins Amateur Radio Club

Monthly Newsletter of the

Volume 36 Issue 11

Web Site <http://www.w5rok.us>

August 2015

RCARC Membership Meeting

Tuesday 25 August 2015
1700 Social 1730 Meeting
1800 Program

Methodist Richardson Medical Center
At Bush/Renner/Shiloh Intersection
Second Floor Conference Room 200

Subject:
Program TBD

NEW HAM!!!!!!

Bob Kirby, K3NT, reports that on Saturday, 15 August, he had a QSO with a brand new Ham on the RCARC repeater. That new Ham is Nathan Diepenbrock, KG5ITK, the son of proud Ham father Bob Diepenbrock, KC4UAI. Nathan had just passed his test at PARK the same day. Congratulations Nathan! Hope to see you join our club in the near future.

(Contributed by Bob Kirby, K3NT)

RCARC operated in the 2015 CQ World-Wide VHF Contest

The following report was received from the CQ Contest robot:

Callsign: W5ROK
Operators: K3NT K5TIP WA8ZBT
Category-Operator: MULTI-OP
Category-Band: ALL
Category-Power: HIGH
Name: Rockwell Collins Amateur Radio Club
Postal Address: 3200 East Renner Road
Postal City: Richardson
Postal State/Province: TX
Postal Code: 75023
Postal Country: UNITED STATES
Log Deadline: 2015-08-03 23:59:59 UTC
Received at: 2015-08-02 15:28:46 UTC
Reported QSOs: 42
Confirmation #: 1560761.cq-vhf

Thank you for your participation in the contest and for submitting your log to cqvhf@cqww-vhf.com.

(Contributed by Dennis Cobb WA8ZBT)

Local Club News

Meeting Notice

The program for this month was not finalized when the newsletter was published, but the meetings are always great, so be sure to be there on Tuesday, 25 August!

RCARC Community Service Activities

Siren Testing Dennis Cobb WA8ZBT, Chris Havenridge KF5GUN, John McFadden K5TIP and Jim Skinner WB0UNI participated in the Richardson emergency siren testing on 5 August 2015. All sirens tested operated normally, with one siren unreported due to lack of an observer. The siren testing is performed on the first Wednesday of each month. The sirens are monitored by amateur radio operators and reports made using the Richardson Wireless Klub (RWK) repeater at 147.120 MHz.

Crime Watch Patrol Jim Skinner WB0UNI participated in Richardson Duck Creek Crime Watch Patrol (CWP). CWP members, after successful completion of Richardson Police Department Training, patrol their neighborhoods and report all suspicious activities to the Police Department.

RCARC OFFICERS			
PRESIDENT		VICE-PRESIDENT	
Mike Schmit 214.862.4249 wa9wcc@arri.net	WA9WCC	OPEN	
SECRETARY		TREASURER	
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MEMBERSHIP		W5ROK CLUB STATION	
Joe Wolf 214.202.2757 n5uic@arri.net	N5UIC	972.705.1349 461-290	

Richardson The Richardson Wireless Klub (RWK) VE team hold license testing on the third Thursday of each month at St. Barnabas Presbyterian Church, 1220 West Beltline Rd. Testing begins at 1900 hrs in room 12. Enter through the Northern most door on the east side of the church building. For further information contact Dave Russell W2DMR, at 972.690.9894 or E-mail warhog4@tx,rr.com.

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President's Message

THIS SPACE RESERVED FOR PRESIDENT'S AND/OR VICE-PRESIDENT'S MESSAGE

VE SESSIONS

Dallas tests are held on the fourth Saturday of each month at 1000 hrs. 13350 Floyd Rd. (Old Credit Union) Contact Bob West, WA8YCD 972.917.6362

Irving tests are held on the third Saturday of each month at 0900. Fifth and Main St. Contact Bill Revis, KF5BL 252-8015

McKinney VE test sessions are held at the Heard Museum the first Sunday of the month. The address is 1 Nature Place, McKinney TX. The time of the testing is 1430, ending no later than 1645. **Note: no tests given on holiday weekends.**

Garland testing is held on the fourth Thursday of each month, excluding November, and begins at 1930 sharp. Location is Freeman Heights Baptist Church, 1120 N Garland Ave, Garland (between W Walnut and Buckingham Rd). Enter via the north driveway. A HUGE parking lot is located behind the church. Both the parking lot and the Fellowship Hall are located on the east side of the church building, with big signs by the entrance door. Contact Janet Crenshaw, WB9ZPH at 972.302.9992.

Plano testing is on the third Saturday of each month, 1300 hrs at Williams High School, 1717 17th St. East Plano. Check Repeater 147.180+ for announcements.

Greenville testing is on the Saturday after the third Thursday, 1000 hrs at site TBA, contact N5KA, 903.364.5306. Sponsor is Sabine Valley ARA. Repeater 146.780(-) with 118.8 tone.

Secretary's Report

28 July 2015

The meeting was called to order by President Mike Schmit WA9WCC at 1741.

The following were present at the meeting:

Jim Brown	AF5MA
Dennis Cobb	WA8ZBT
Lisa Foster	Guest
Mike Hollingsworth	W5QH
Daniel Hollingsworth	Guest
Kon Kelley	Guest
Bob Kirby	K3NT
John McFadden	K5TIP
Mike Schmit	WA9WCC
Jim Skinner	WB0UNI

Officers and Committee Reports:

President's Report: There was no formal President's Report.

Vice-President's Report: There was no formal Vice President's Report.

Secretary's Report: The Secretary's Report is in this newsletter.

Treasurer's Report: There was no formal Treasurer's Report.

Website Manager's Report: There was no Website Manager's Report.

Station Trustee's Report: There was no Station Trustee's Report.

Database Manager's Report: There was no Database Manager's Report.

Old Business:

There was no old business.

New Business:

Mike Schmit WA9WCC announced that the annual election of RCARC officers will be held at the September 2015 meeting.

Bob Kirby K3NT reported that the purchase of a lightning arrestor, replacement pads for headsets and batteries for the MFJ-269 antenna analyzer was completed in accordance with prior authorizations.

Dennis Cobb WA8ZBT reported on the successful completion of Field day operations, achieving 1,168 contacts (approximately one-third phone and two-thirds CW), even though the station was on-air for only 16 of the 24 hours of Field Day. Dennis Cobb WA8ZBT also reported on partici-

pation in the CQ Worldwide Contest. A total of 46 contacts were accomplished on 2-meter and 6-meter bands. All three radios were networked with the N1MM, and all equipment performed well.

Membership agreed that a group was needed to investigate additional equipment purchases totaling \$2,000 to \$3,000. Jim Skinner WB0UNI, Bob Kirby K3NT and Dennis Cobb WA8ZBT volunteered to study the matter and report back at the next meeting.

Adjournment:

The meeting was adjourned at 1815 and followed by "Modeling History in 3D," a fascinating program presented by guests Kon Kelley and Lisa Foster.

Rockwell Collins to End Mechanical Filter Production

As more and more communications equipment designs have adopted digital signal processing techniques, Rockwell Collins has announced that it will stop manufacturing its renowned mechanical filters. It did not provide a specific date.



"Over the past several years, we have seen a dramatic reduction in demand for narrowband analog filters," the company said on its website. "Due to this and other economic reasons, [Rockwell Collins] Filter Products will be discontinuing its mechanical filter products in the near future."

Rockwell Collins makes two different types of mechanical filters, many of which have found their way into Amateur Radio products and applications. In a mechanical filter, input and output transducers convert the electrical signal to and from resonant mechanical vibrations, respectively.

"For frequencies between 100 kHz and 700 kHz, we create filters made from rods resonating in a torsion mode," the company explained on its website. "For frequencies below 100 kHz, we use flexure mode bar resonators."

Collins has made mechanical filters for more than 6 decades, and their initial application was in telephone circuits. The filters gained favor for Amateur Radio use because of

their excellent selectivity, especially in IF applications. It is said to take about 12 weeks to manufacture a single unit.

Art Collins, W0CXX (SK), founded Collins Radio Company in 1933 in Cedar Rapids, Iowa. That same year Collins supplied the equipment to establish communication with the Byrd South Pole expedition. Over the years, Collins produced a line of Amateur Radio equipment, and its products remain popular among radio amateurs and collectors. Rockwell International purchased the company in 1973, and Rockwell Collins was spun off in 2001. Today, the company has focused its market on electronic communications, avionics, and in-flight entertainment systems. — Thanks to Mike Morris, WA6ILQ; Rockwell Collins.

(Courtesy of ARRI.Net website: <http://www.arri.org/news/rockwell-collins-to-end-mechanical-filter-production>)

Global eavesdroppers: In World War II, dozens of radio operators in Scituate dialed into enemy conversations worldwide

Reception was incredible: They could pick up tank-to-tank communications among Rommel's Afrika Korps



The Chopmist Hill house at 183 Darby Rd. that was used as a listening post to enemy radio transmissions.

By Tom Mooney

Journal Staff Writer Posted Aug. 8, 2015 @ 10:30 pm

Seventy years ago this week Rhode Islanders swarmed into the streets with other joyous Americans celebrating the end of World War II. It would be three more months before the world learned of Rhode Island's top-secret role in defeating Germany and Japan.

It was a tale of espionage, now virtually forgotten, centered in, of all places, an old farmhouse in Scituate.

The clandestine mission that went on up there on Chopmist Hill from 1941 through 1945 not only helped defeat the enemy, historians say, but brought to Rhode Island the

representatives of a new organization called the United Nations, looking for a headquarters location.

Incredible, perhaps. But true.

"They even had plans to build an airstrip if the United Nations ended up here," says Scituate Town Historian Shirley Arnold. "Can you imagine that? In Scituate?"

No one knows the story anymore, she says. "All the old-timers are gone."

There was nothing remarkable to see on Chopmist Hill in 1940 when, a year before the Japanese would attack Pearl Harbor and bring America into the war, a Boston radio technician by the name of Thomas B. Cave drove up Darby Road.

England was already at war with Germany, and Cave knew it was inevitable that the United States, already fortifying Great Britain with supplies and weaponry, would enter, too.

Cave worked for the Intelligence Division of the Federal Communications Commission, charged with finding a hill-top in southern New England that could serve as one of several listening posts to detect radio transmissions from German spies in the United States.

What he discovered up at William Suddard's 183-acre farm was nothing short of miraculous.

Because of some geographic and atmospheric anomalies, Cave reported he could clearly intercept radio transmissions coming from Europe — even South America.

As a Providence Journal story revealed after the war, military officials were initially skeptical. They wanted Cave to prove his remarkable claims that from Chopmist Hill he could pinpoint the location of any radio transmission in the country within 15 minutes.

The Army set up a test. Without telling the FCC, it began broadcasting a signal from the Pentagon. From atop the 730-foot hill in the rural corner of Scituate, it took Cave all of seven minutes to zero in on the signal's origin.

In March 1941, the Suddards obligingly moved out of their 14-room farmhouse, leasing the property to the FCC.

Workers set off erecting scores of telephone poles across the property, purposely sinking them deep to keep them below the tree line. They strung 85,000 feet of antenna wire — the equivalent of 16 miles — around the poles and wired it into the house.

They fenced off the perimeter, erected floodlights and established armed patrols to keep people out. They filled six rooms with banks of sensitive radio receivers, transmitters and directional finders.

Then the FCC turned loose a 40-member spy team of men and women to listen in on the world — although none of them knew the full extent of the information they were cultivating.

The interceptors kept tabs on more than 400 different enemy radio transmitting stations broadcasting on any given day. They ferreted out secret low-frequency transmissions hidden under the beams of commercial radio stations abroad.

Much of what they intercepted were coded messages that were then recorded and sent electronically to Washington's "black chamber" for decoding.

Shaping the war

The Chopmist Hill listening post soon became the largest and most successful of a nationwide network of 13 similar installations. Its ability to eavesdrop on German radio transmissions in North Africa, for instance, was so precise that technicians could actually listen in on tank-to-tank communications within Field Marshal Erwin Rommel's infamous Afrika Korps.

The Germans' battlefield strategy was then relayed to the British, who under Field Marshall Bernard Montgomery eventually defeated Rommel at El Alamein.

The Chopmist station is also credited with saving the Queen Mary, the pride of England's maritime fleet, as it was about to sail with 14,000 troops from Rio de Janeiro, Brazil, to Australia.

The station intercepted orders from Germany to the Nazi's submarine wolf pack operating in the south Atlantic to sink the ship. The radio station alerted the British, who ordered the ship to change course.

Cave, who supervised the Chopmist Hill station, told The Journal in November 1945 that virtually all the wartime messages sent by German spies working in the United States were intercepted in Scituate.

Often, those German spies were allowed to continue operating so counterintelligence officers could run down their sources of information.

One of Scituate station's most important jobs was to intercept German weather reports from Central Europe.

The reports, broadcast at a frequency undetectable in England, flowed easily across the Atlantic to Chopmist Hill. The information proved vital for British bombing raids over Germany.

Occasionally the station assisted in air and sea rescue operations. On one occasion a plane carrying actress Kay Francis got lost off the coast of Florida en route home from a USO tour. No other radio installation on the East Coast had picked up the pilot's distress calls, but the Chopmist Hill station did, guiding the plane home safely.

In 1981, George Sterling, who had been the FCC commissioner during the war, told a Providence Journal reporter that he never understood why the United States was caught by surprise in the Dec. 7, 1941, attack on Pearl Harbor since the Chopmist Hill listening station had for

months been intercepting Japanese messages in the Pacific indicating an impending attack.

Once war broke out, the station thwarted Japanese attempts to bomb the United States using unmanned hot-air balloons laden with explosives. The Japanese had placed radio transmitters on the balloons to track them as they rode the jet stream across the Pacific in the hope they reached the West Coast of America. Many did, and the Scituate eavesdroppers heard the balloon signals. They relayed the information to Washington. U.S. fighter planes intercepted and destroyed the balloons.

Germany surrendered on May 7, 1945, a week after Hitler committed suicide in a bunker in Berlin. The Japanese agreed to surrender on Aug. 14, 1945, five days after the U.S. dropped a second atomic bomb, on Nagasaki.

UN takes a look

The remarkable radio capabilities of Chopmist Hill captured world attention after the war when, in November 1945, the FCC permitted a Providence Journal reporter to visit the monitoring station.

Two months after her story ran, seven inspectors from the United Nations Organization were climbing an icy fire lookout tower on Chopmist Hill and scanning the rural landscape below for what might become their new headquarters.

The Jan. 26, 1946, issue of The Providence Journal carried the lead headline: "Chopmist Hill District is rated One of Top Potential Locations for UNO Quarters by Committee."

The story described how inspectors were seriously considering the site as its headquarters because of area's unmatched capability to reach every corner of the globe by radio.

"This is a possible site," Dr. Stoyan Gavrilovic, of the Balkans and chairman of the inspection committee, told reporters during the tour. "It meets most of the technical points. It is good."

During the tour the inspectors went into a room in the Suddard farmhouse where on one bank of radio equipment signs hung listing the cities of Lisbon, Madrid and Cairo — the cities the radios were tuned to.

One of the inspectors asked Cave, directing the tour, what was the range of the radio station?

"Well, Sydney, Australia," replied Cave. "That's about the farthest place there is."

The inspectors said they were also looking for a wide tract of land to build an airport as well as a headquarters. Cave said the site offered about 50 square miles of property spanning Scituate, Foster and Gloucester that could be available, although about 1,000 people would have to be relocated.

The inspectors were in town for only a couple of days before heading off to inspect possible sites around Worcester and Boston.

In the end, the United Nations officials settled on New York City after John D. Rockefeller Jr. offered them \$8.5 million to purchase a six-block tract of land along the East River.

Today the Suddard house still stands behind the same ornate stone wall it did more than 70 years ago. But the hill around it, once mostly pasture and scrub, is covered with tall trees and dotted with new homes.

The house, privately owned again, reveals few clues to what happened there the last time the world went to war, save for a tall, thin radio tower in the yard, now covered in ivy, reaching for the clouds.

(Link at <http://www.providencejournal.com/article/20150808/NEWS/150809367> contributed by Bob Kirby K3NT)

Understanding Antennas For The Non-Technical Ham - Part 12

Each month for the next year or so, we are including in **SIGNALS** excerpts of a book by Jim Abercrombie – N4JA (SK) on antenna design. This book is available online for free and can be located at <http://www.hamuniverse.com/basicantennas.pdf>. Now, part 12...

Understanding Antennas for the Non-Technical Ham

A Book By Jim Abercrombie, N4JA (SK)

Illustrations by Frank Wamsley, K4EFW

Edited by Judy Haynes, KC4NOR

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Edited for the web, N4UJW

XIV. ONE-WAVELENGTH SINGLE LOOP ANTENNAS

1. The Horizontally Oriented Loop

To calculate the length in feet of any one-wavelength loop, divide 1005 by the frequency in MHz. Horizontally oriented one-wavelength loop antennas have become very popular on 160, 80, and 40 meters and it is one type of NVIS antenna. (NVIS stands for "near vertical incidence skywave" because of its high angle radiation pattern.) It is claimed by its users that the loop antenna is quieter than other antennas. This is because it doesn't pick up the noise from power lines, thunderstorms, etc., coming in at low angles. These antennas radiate on their fundamental frequencies with a broad pattern straight up to put a strong signal for nearby contacts. Recently published articles on this type of antenna have called them "cloud warmers." There are other types of antennas called NVIS antennas other than loops. They are dipoles at low heights or dipoles with parasitic reflectors placed under them to cause the signal to radiate mostly straight up. The NVIS antennas have an advantage in working nearby stations because you don't get the static noise and interference from far distances. They are defi-

nately not DX antennas. An article on NVIS antennas appears in the December 2005 QST.

On their fundamental frequencies, horizontally oriented loops take up half the horizontal distance as a half wave antenna for that band. Loops are two-dimensional antennas having depth as well as breadth. There are two loop configurations: The square loop and the triangle loop. Some hams have pulled the loops out in irregular shapes to fit where the supports are located. The only advantage in using a rectangular loop instead of a square loop is to take up less horizontal space. This is true because the gain of a rectangular loop is diminished below a square loop. The area enclosed by the perimeter of the loop determines the gain of a loop. A circular loop has the most enclosed area, but it requires an infinite number of supports. The gain of a loop comes from the loop having two maximum current points separated by a distance of one-quarter wavelength. From here on we will call a horizontally oriented loop a horizontal loop.

We also modeled the gain of the horizontal loop for the 80-meter band over real ground. The maximum gain occurs with the loop at 7 meters or about 25 feet above ground. Mind you, this gain is straight up from the loop. At that height, its gain is about 9.25 dBi and that equates to about 7 dBd in free space. The gain of the loop diminishes slightly as the antenna is raised. The feed-point radiation resistance at 7 meters height is 35 ohms resistive and 0.0 ohms reactance and you do not need a matching section of 70 ohm coax. At a height of 10 meters or about 33 feet, the radiation resistance rises to 63.5 ohms. There the SWR will be 1.27:1, if it is fed directly with 50-ohm coax. At 15 meters or about 50 feet, the radiation resistance rises to 118 ohms and a 70-ohm matching section will be in order. The gain drops to a little less than 7 dBi at that height. These figures may or may not be applicable to your QTH, because your soil conductivity may be different from the soil we used to model it. As you can see from the above numbers, the feed-point resistance rises as the loop is raised.

The horizontal loops also are used on their harmonic frequencies. The loop with more gain and a superior pattern is a two-wavelength loop. An 80-meter loop is a two-wavelength loop on 40 meters. The two-wavelength loop has a lower angle of radiation, but is a very large antenna for 80 meters. At 3800 kHz it has a perimeter of about 530 feet. A two-wavelength loop is not an NVIS antenna. Using coax with a tuner is not an ideal way for working a loop on its harmonic frequencies. This is because of the high SWR in the coax on some bands will cause high loss. For example, an 80-meter loop fed on 40 meters will have an SWR of 8:1 and the SWR on 20 meters will be 49.5:1. There will be some hams who will say they get satisfactory results this way, however theory suggests they will have a stronger signal if they use a ladder-line because ladder-line has less loss. Feeding a loop antenna with ladder-line makes more sense when working a loop on harmonic frequencies.

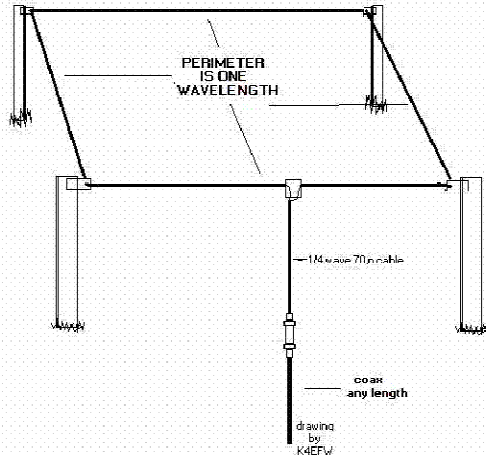


Figure 29. One Wavelength Horizontal Loop

To realize maximum gain, make the square and triangle have equal sides. When the sides are equal, the loop has maximum enclosed area for whatever configuration you use. Other shapes will work, but the gain will suffer.

To support a square loop, you will need four supports, one for each corner. We hope you will have trees or masts in the right places. A triangular loop will need three supports. Once you have cut the single piece of wire to the right length, run the wire through as many insulators as you have corners. At each corner of the loop, put an insulator and tie the corner to a support with a rope from the insulator. To make the feed-point, connect both ends of the loop to an insulator. Strip the insulation from the outer part of the coax. Separate the shield from the center conductor. The ends of the coax are connected to the ends of the loop across the insulator. Most hams do not feed loops with a balun at the feed-point.

2. The Vertically Oriented Single Loop for 40 and 80 Meters

Vertically oriented loops radiate broadside to the plane of the loop. A horizontally polarized vertically oriented loop has both vertical and horizontal wires. From here on out, we will refer to a vertically oriented loop as just a vertical loop. When using this term, we are not referring to its polarization. If the feed-point is on one of the horizontal wires, the loop radiates horizontally polarized waves. The vertical wires radiate weaker vertically polarized waves. If the feed-point is on one of the vertical wires, vertically polarized waves will be radiated. The radiation from a one-wavelength vertical loop has both high-angle and low-angle radiation. It is a good antenna for both nearby stations and for DX contacts. It is better than a dipole for DX because the vertical loop puts out a stronger low angle signal than a dipole does.

The gain of a vertical delta loop is 4.55 dBi or about 2.4 dBd. Its feed-point impedance is about 120.5 ohms. The square vertical loop has 5-dBi gain and about 2.85 dBd

and the feed-point resistance is 143 ohms. They both need to be fed with a series quarter-wave matching section of 70-ohm coax.

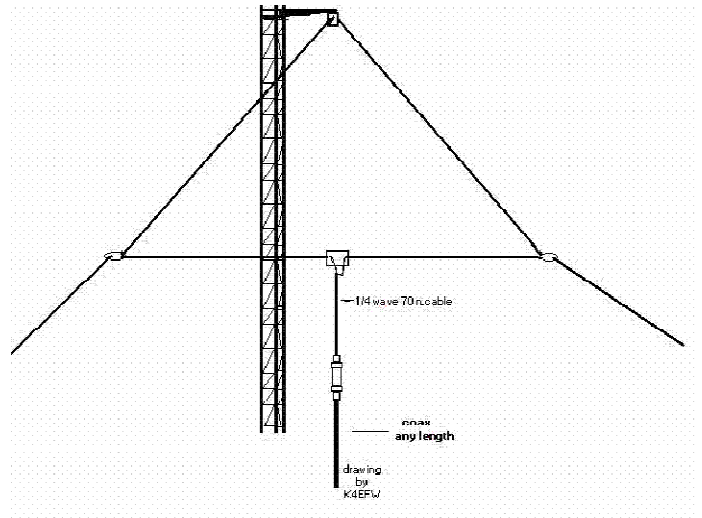
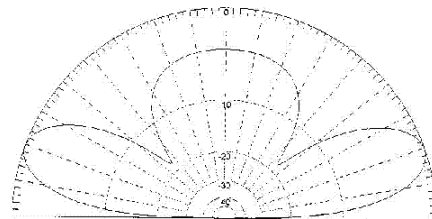
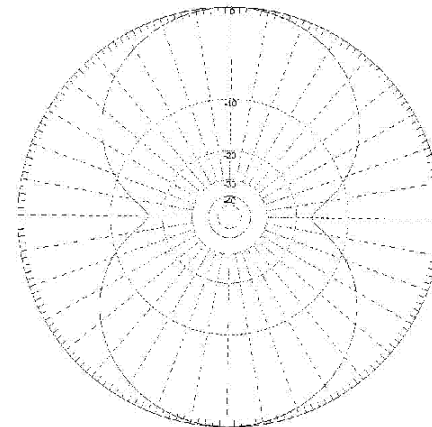


Figure 30. Single-Element Vertical Delta Loop

MMANA-GAL v. 1.0.0.65



Ga : 8.43 dBi = 0 dB (Horizontal polarization)
 F/B: 0.00 dB; Rear: Azim. 120 dg, Elev. 60 dg
 Freq: 10.100 MHz
 Z: 101.904 - j2.068 Ohm
 SWR: 2.0 (50.0 Ohm), 5.9 (800 Ohm)
 Elev. 19.6 dg (Real GND :18.00 m height)

Figure 31. Radiation Pattern of a 30-Meter Delta Loop on 30 Meters.

Square vertical loops need two supports. The square vertical loop needs less vertical space than the delta loop. The vertical space needed for a square vertical loop for 80 meters is 92 feet. For 40 meters the vertical space is half that.

It is rare to find someone using the square vertical loop these days. The vertical delta loop is more common because it needs only one high support. The apex of a delta loop for 3500 kHz needs to be 102 feet high and on 40 meters, it needs to be 62 feet. This assumes the bottom horizontal wire will be 20 feet off the ground. In order to make a vertical loop fit on a shorter support, the sides of the loop can be reduced in length while making the horizontal wires longer. This will put the two maximum current points closer together, which has the effect of reducing the gain.

Like the horizontal loop, the formulas for finding the length in feet of these loops are the same: 1005 divided by frequency in MHz. In addition, because the feed-point resistance is nearly the same as horizontal loops, quarter-wave matching sections and other methods can be used to feed the vertical loops. The vertical loop is not as sensitive to height as the horizontal loop. Both vertical square loops and vertical delta loops can be operated on harmonically related bands. (See Figure 32).

The horizontal pattern shown above demonstrates that the 30-meter delta loop has a bi-lobal pattern broadside to the plane of the loop. The vertical pattern below the horizontal pattern shows both high angle and low angle radiation. The angle of maximum radiation is at 35 degrees above the horizon. The angle of radiation straight up is only down about 1.5 dB. This is pattern demonstrates the vertical delta loop is good for both nearby stations as well as DX.

ARLB023 Amateur Radio Vanity Call Sign Fee to Disappear in September

ZCZC AG23

QST de W1AW

ARRL Bulletin 23 ARLB023

From ARRL Headquarters

Newington CT July 30, 2015

To all radio amateurs

The Amateur Radio vanity call sign regulatory fee is set to disappear in the next few weeks. According to the best-available information from FCC sources, the first day that applicants will be able to file a vanity application without having to pay a fee is Thursday, September 3. In deciding earlier this year to drop the regulatory fee components for Amateur Radio vanity call signs and General Mobile Radio Service (GMRS) applications, the FCC said it was doing so to save money and personnel resources. The Commission asserted that it costs more of both to process the regulatory fees and issue refunds than the amount of the regulatory fee payment.

"Our costs have increased over time, and now that the costs exceed the amount of the regulatory fee, the increased relative administrative cost supports eliminating this regulatory fee category," the FCC said in its Report and Order, which appeared on July 21 in The Federal Register. "Once [it's] eliminated, these licensees will no longer be financially burdened with such payments, and the Commission will no longer incur these administrative costs that exceed the fee payments."

The FCC raised the Amateur Service vanity call sign regulatory fee from \$16.10 to its current \$21.40 for the 10-year license term in 2014. The \$5.30 increase was the largest such fee hike in many years. In a typical fiscal year, the FCC collected on the order of \$250,000 in vanity call sign regulatory fees.

The FCC said the revenue it would otherwise collect from such regulatory fees "will be proportionally assessed on other wireless fee categories." Congress has mandated that the FCC collect nearly \$340 million in regulatory fees from all services in fiscal year 2015.

(Reprinted courtesy ARRL.Net website)

MMANA-GAL v. 1.0.0.65

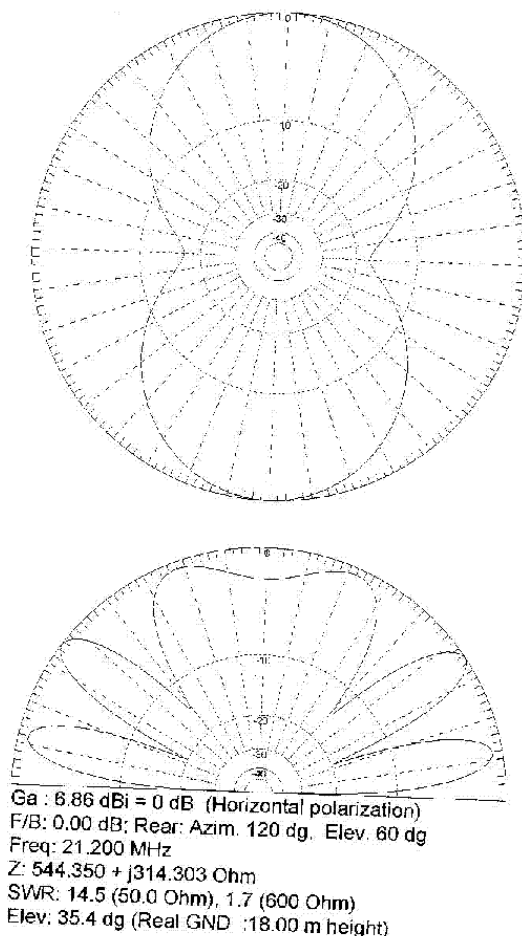
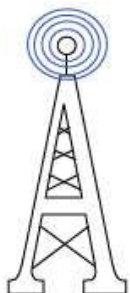


Figure 32. Radiation Pattern of a 30-meter Delta Loop on 15 Meters

The Bottom Wire is at 18 Meters above Ground.



Texoma Hamarama

**October 23-24, 2015
Ardmore, Oklahoma**

Texoma Hamarama Family FunFest, Southern Oklahoma's largest indoor air-conditioned Ham Fest, forum, swap meet, expo and ham radio market place.

This year, we are proud to be hosting the ARRL State Convention. League members from around the West Gulf Coast division of the Amateur Radio Relay League (ARRL) and the Amateur Radio Emergency Service (ARES) will be in attendance, both on the trade floor and in the forums.

Friday

Setup 12:00 Noon
Open 5:00 PM until 8:00 PM

Saturday

Setup 7:00 AM
Open 8:00 AM until 1:00 PM

A Giant Thank You to Everyone That Comes out for Texoma Hamarama, If you need any assistance find someone in a Yellow Vest/Hat and they will be able to help you with any need.

To receive the latest updates on Texoma Hamarama please send your email address to:

texomahamarama@gmail.com

[Click here for Registration Information](#)

Upcoming Events

SEPTEMBER

- 5-6 EME - 2.3 GHz & Up** The objective is to work as many amateur stations as possible via the earth-moon-earth path on any authorized amateur frequency above 50 MHz. 48-hour periods (0000 UTC on Saturday through 2359 UTC Sunday). More info at <http://www.arrrl.org/eme-contest>.
- 12-14 SEPTEMBER VHF** The objective is for amateurs in the US and Canada (and possessions) to work as many amateur stations in as many different 2 degrees x 1 degree Maidenhead grid squares as possible using authorized frequencies above 50 MHz. Stations outside US & Canada (and possessions) may only work stations in the US (and possessions) and Canada. Stations in KH0-9, KL7 & KP1-KP5, CY9 and CY0 count as W/VE stations and can be worked by DX stations for credit. Runs 1800 UTC Saturday through 0259 UTC Monday. More info at <http://www.arrrl.org/september-vhf>.
- 19-20 10 GHz & Up – Round 2** The objective is for North American amateurs to work as many amateur stations in as many different locations as possible in North America on bands from 10-GHz through Light. Amateurs are encouraged to operate from more than one location during this event. See detailed rules for restrictions. Date: Third full weekend of September. May operate for 24 hours total. The weekend begins at 6:00 AM local Saturday through 12:00 midnight local Sunday. More info at <http://www.arrrl.org/10-ghz-up>.

OCTOBER

- 19-23 SCHOOL CLUB ROUNDUP** The objective is to exchange QSO information with club stations that are part of an elementary, middle, high school or college. Non-school clubs and individuals are encouraged to participate. The 5-day event runs Monday through Friday from 1300 UTC Monday through 2359 UTC Friday. A station may operate no more than 6 hours in a 24-hour period, and a maximum of 24 hours of the 107 hour event. More info at <http://www.arrrl.org/school-club-roundup>.

REGULAR ACTIVITIES

- Daily** DFW Early Traffic Net (NTS) at 6:30pm 146.88 – PL 110.9Hz
- Daily** DFW Late Traffic Net (NTS) at 10:30pm 146.72 – PL 110.9Hz
- Daily** Texas CW Traffic Net (NTS) at 7:00pm on 7053 KHz and at 10pm on 3541 KHz www.k6jt.com
- 1st Wednesday** Richardson Emergency Siren Test. At noon using the Richardson Wireless Klub (RWK) repeater at 147.120 MHz.
- 2nd Wednesday** ARES North Texas HF Net Every month—3860 KHz at 8:30 pm—9:30pm

Rockwell-Collins

Amateur Radio Club

Mail Station 461-290

P.O. Box 833807

Richardson, TX 75083-3807

TO:



CLUB STATIONS
 (972) 705-1349

W5ROK REPEATER
 441.875 MHz +5 MHz Input
 131.8 Hz PL - RX and TX

W5ROK-1 PACKET BBS ROK Node
 145.05 MHz

W5ROK-N1, W5ROK-N2 & W5ROK-N3 HSMM-MESHNET Nodes 2.4 GHz

Tuesday 25 August 2015
 1700 Social 1730 Meeting

Methodist Richardson Medical Ctr
At Bush/Renner/Shiloh Intersection
Second Floor Conference Room 200

NEXT SIGNALS INPUTS DEADLINE:
→→→ 11 September 2015 ←←←