
SIGNALS

Rockwell
Collins **Amateur Radio Club**

Monthly Newsletter of the

Volume 35 Issue 02

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

November 2013

RCARC
Membership Meeting

Tuesday 26 November 2013
1700 Social 1730 Meeting
1800 Program

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

Subject:
D-STAR Radios
by Joe Wolf, N5UIC

RCARC Community Service Activities

Siren Testing. Dennis Cobb WA8ZBT, John McFadden K5TIP and Jim Skinner WB0UNI participated in the Richardson emergency siren testing on 6 November 2013. The testing was cancelled at the last minute by the city of Richardson because of the weather conditions. 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.

RF Charts

By Keith KC1ATT:

This weekend I updated my website, www.rfcharts.com to include the newly released IARU Region 2 band plan. The International Amateur Radio Union works to synchronize amateur band plans round the world. ARRL is the IARU Secretariat and published the plan in the ARRL newsletter. The published plan does not include FCC privileges, so I put the two together in one set of notes and added applicable FCC regulations for all bands. I also added frequencies commonly used for narrowband data (e.g. PKS31).

The web site was designed for short wave listeners but Hams can go right to the 'Bands' tab, select a band and then click on the 'Band Notes' button to view the band plan and FCC regulations. If you want a paper copy you're better off using the plan published in the ARRL newsletter. (<http://www.arrl.org/news/iaru-region-2-publishes-new-band-plan>)

If you have trouble with the site or find errors, please email me directly at keithc@rfcharts.com.

(And, for those interested in short-wave broadcasting, check out the info at <http://www.short-wave.info/>. This site allows the user to find out what's on at any given time, find out what stations are transmitting on a particular frequency and when your favorite SW stations will be best received at your QTH. Plus, lots of other useful info on short-wave listening. This is by far the best catalog of short-wave broadcast stations available on the Web.) *de KR1ZAN*

Local Club News

Meeting Notice

Joe Wolf, N5UIC, will present a review of the Icom ID-51A HT (VHF/UHF, D-Star) and IC-7100 Mobile/Base (HF/VHF/UHF, D-Star, All Mode) Transceiver. There will be about a 20 minute presentation, with the HT in use and then photos, possible video of the 7100, followed by question/answers/discussion. Joe may also include a couple of other of his toys for the presentation as well. Every ham wants to hear about the latest innovations in Amateur Radio gear or anything else technical, so don't miss this.

E-Mail List and Club Roster Update

The club needs for all members to provide their preferred e-mail address, (and phone number and home address if they have changed in the last year) that is outside of rockwellcollins.com. (Please send to wa8zbt@arrl.net) If an employee retires or is RIFed we require this outside e-mail address to continue sending them RCARC SIGNALS and club activity information.

RCARC OFFICERS

PRESIDENT Dennis Cobb WA8ZBT 972.705.1457 ddcobb@rockwellcollins.com	VICE-PRESIDENT Bob Kirby K3NT 319.360.0500 k3nt@arrl.net
SECRETARY Jim Brown AF5MA 972.495.2209 jhksbrown@verizon.net	TREASURER Mike Montgomery WD5TX 972.705.1498 wd5tx@arrl.net
ACTIVITIES CHAIR- OPEN	WEBSITE MANAGER OPEN
STATION TRUSTEE Steve Phillips K6JT 972.517.3332 k6jt@arrl.net	NEWSLETTER EDITOR Jim Skinner WB0UNI 214.535.5264 wb0uni@arrl.net
DATABASE MGR Joe Wolf N5UIC 972.705.1388 n5uic@arrl.net	W5ROK CLUB STATION 972.705.1349 461-290

VE SESSIONS

Dallas tests are held 4th Sat of each month at 1000 hrs. 13350 Floyd Rd. (Old Credit Union) Contact Bob West, WA8YCD 972.917.6362

Irving tests are held 3rd Sat 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 3rd Thursday, 1000 hrs at site TBA, contact N5KA, 903.364.5306. Sponsor is Sabine Valley ARA. Repeater 146.780(-) with 118.8 tone.

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

I would like to welcome the new Officers for FY 2014: Vice President Bob Kirby (K3NT), Secretary Jim Brown (AF5MA), and Treasurer Mike Montgomery (WD5TX).

Bob Kirby (K3NT) assisted Mike Schmit (WA9WCC) in putting up an antenna outside at his home, so Mike can get rid of some of the noise he has had.

Bob Kirby (K3NT) and Mike Schmit (WA9WCC) continue to help with maintenance on the B-29 Airplane, "Fifi".

The monthly Siren Test for Richardson was not held due to rain the night before and overcast weather. There are usually spots open each month to be filled if anyone is interested in going out to a site. The test is done on the first Wednesday of each month at 12 Noon. You can listen in on 147.12 Mhz. It only takes a few minutes to perform the test. Some of the hams meet afterward to eat lunch.

If anyone has program ideas please share your suggestion with one of the officers.

That's it for this month. I hope to see you at our meeting on Tuesday, November 26, at 5:30pm.

73,
Dennis Cobb
WA8ZBT
RCARC President

Secretary's Report

22 Oct 2013

The meeting was called to order by President Dennis Cobb WA82BT at 1738.

The following were present at the meeting:

Ken Bateman	W5ISE
Jim Brown	AF5MA
Dennis Cobb	WA8ZBT
Hernando Garcia	KC5FDW
Bob Kirby	K3NT

John McFadden	K5TIP
Jim Skinner	WB0UNI
Fred Welsh	AMA 29723
Joe Wolf	N5UIC

Officers and Committee Reports:

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

Vice-President's Report: We currently have no Vice-President.

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

Treasurer's Report: There was no 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:

A total of 466 contacts were established by W5ROK during Rockwell Collins 80th Anniversary operations. Dennis Cobb WA8ZBT operated during the first week, with Bob Kirby K3NT and Mike Schmit WA9WCC taking over duties for the second week.

There was no response to a request for a work detail in October, so the planned antenna installation has not been completed.

The death of Warren Bruene, retired Rockwell Collins engineer and long-time member of RCARC, was reported. His many technical accomplishments were recalled by members in attendance.

New Business:

New RCARC members Ken Bateman W5ISE (in attendance) and Daniel Hollingsworth (not in attendance) were announced and welcomed.

The meeting was adjourned at 1806 and followed by a program on radio-controlled aircraft by Fred Welsh AMA 29723 and John McFadden K5TIP.

Local ham answers the call for a DXPedition to The Kingdom of Swaziland!

Victor Paul WB0TEV, a passionate DXer and con-tester who achieved DXCC in the 1990s, joins the multinational DXPedition to the tiny African nation.

The Kingdom of Swaziland, also known by locals as Um-buso-waseSwatini is a very small country that is sur-rounded by the countries of South Africa and Mozambique. With a land mass of only 17,364 square kilometers and a population of around 1.2 Million, you would not expect too many amateur radio operators to exist there. Only about

100 operators have licenses in the country. This is one of the reasons this country is so enticing for a DXPedition.

Having experience in establishing other African DXPeditions, Charles "Frosty" Frost K5LBU threw his efforts into this multinational trip for 2013. His experience is amplified by many years living in different countries of Africa with his wife. Frosty and Roger Jones ZS6RJ from South Africa, teamed up to perform the scouting detail some time before the event, in order to secure the site and facilities and final-ize the plans. Many of the team members also participated in a 2012 DXPedition to Lesotho as 7P8D.

Announcements started to go out for operators around Au-gust of 2013. Along with some of the announcements, a survey was begun in order to get a feel for what DXers were looking for, with regard to bands and modes. As a result, a team was starting to form with the expertise and equipment that would set this plan into motion in Novem-ber. Victor Paul WB0TEV saw this as an opportunity to experience two items on his "bucket list": visit Africa as well as participate in a DXPedition and experience the other side of the pile-up. In fact, Victor had been hoping to go on an African DXPedition for several years. So, after surveying his built-up vacation time, he contacted Frosty and Roger who invited him to join and he bought a ticket.

The team will assemble in Johannesburg, South Africa and then drive to Piggs Peak, Swaziland. Along they way, they may see Kruger National Park, if time permits. Victor will be heavily operating RTTY as well as some phone. The operations that Frosty and Roger setup are boiler plate operations that have been done before, so there are not too many "unknowns" involved. The cost is "only" \$225/day and covers everything except transportation. He is hoping that the whole package with airfare will be less than \$5000 and possible less than \$4000.

Victor had the opportunity to address his fellow club mem-bers of Majors Field Amateur Radio Club at their October meeting to tell about his plans for this event. It was great to see the excitement and anticipation of working the other side of the pile-up. *By Michael Ketchum – K5MDK.*

Small Backyard; Big Signal -- Shrunk 40 Meter Phased Quads:

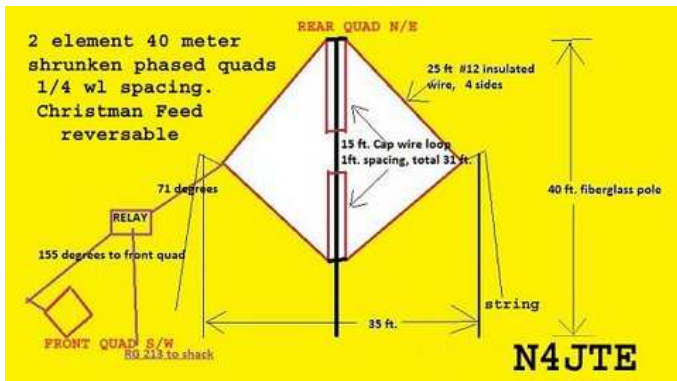
by Bob Raynor, N4JTE

Let me state this up front, this is not an antenna project for the faint of heart, nor does it describe an all band, miracle working, coax fed multi DX pile up buster.

It is however a 2 element small footprint 40 meter phased, reversible, downsized quad array that surprised me big time and I am Real picky. So that's what I am going to de-scribe here with the hope that someone out there will find the same enjoyment I get from this sucker.

I began this project with a lot of unknowns that could only be proven after I built it. This one is way beyond my model-

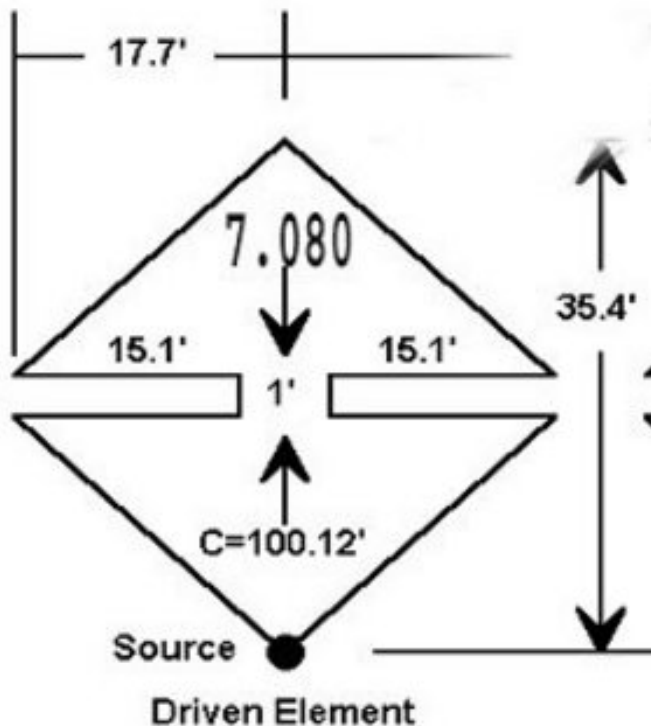
ing abilities so real world backyard testing was the only way to go.



How do you shrink 2 full size quads without killing the gain and bandwidth? Is there any way an almost ground mounted diamond shaped quad array will do anything?

Lastly, the big question, could I use a very successful reversible phased vertical Christman, (ON4UN) method of feeding to get that gain and front to back I enjoyed with phased verticals at 1/4 WL spacing.

Well the easy answer is a big Yes and then some. Let me preface everything to follow by stating that this monoband design can be used on any band when extrapolated dimensions are applied. Thanks to Mr. Cebik, sk, I read of a way to capacity load a quad and shrink it in all dimensions by 25% a substantial amount when space is at a premium. He added the extra wire in two horizontal dimensions.



That was my first attempt and it was a nightmare to build with all the floppy wires and anchor strings but it tuned to 7.080, exactly where he predicted, but way too tricky and flimsy to build. My radio was in surgery so I had free time to try a different, hopefully, simpler configuration.

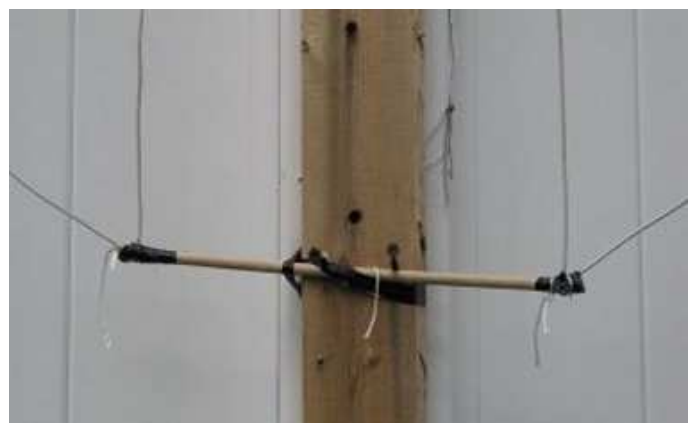
I killed two birds so to speak and attached the capacity load wires to the 40 ft fiberglass center pole and went for vertical polarization by feeding an outside corner to avoid the high current points at the top and bottom corners of the cap wires and possibly screw that up. To be honest it was all guesswork!

Ended up with a much more stable and doable design but would it change anything drastically? Actually no, but for some reason the frequency dropped to 6.9, I did not bother changing anything until the other element was installed, mutual impedance you know!

So I put the second quad up with the exact same dimensions and watched this experiment blow around in 35 mph winds before checking each for resonance.



Long story short, a little pruning got me to 7.150 on both. I hooked up the previous phaselines to the outside corners and checked at the radio. I got a 1.7 swr in each direction, workable with no tuner required.



Front to back was around 4 S units. Usable bandwidth is from 7.135 thru 7.185. The ability to work Corsica and then, with a flick of the switch, contact a Columbia, SA station is a lot of fun especially when both stations report a "booming" 5-9 plus signal report. Rig is IC 735 with AL 811H at 400 watts.

Bottom line is that I am writing this at 3am after spending another fun night working NE and SW DX stations at will on first call. Often I am the first station to place the DX station on the summit and that's a trip! The quad array is surpassing all expectations and I am very happy with the perceived gain and front to back, subjective I know but this design is gonna be here to the next "Big Idea".

What I Learned

1: The Christman, ON4UN reversible system works great on quads not just ¼ WL phased verticals.



Expert waterproofing, Not! See www.n4jte.blogspot.com for phasing details.

2: A quad correctly shrunk by 25% will do a very credible job on 40 meters if DX is your thing.

3: Vertical polarization on a quad is worth the effort especially at low heights in a diamond configuration.

4: This array outperformed a 40 meter EDZ at 60 ft. the later it got on the band.

5: It is better than a 2 element vertical array previous installed on same poles and much quieter than expected with local QRN.

FINAL THOUGHTS

As I said, this article/project is not for everyone and probably will end up in the "what's next" category but if you are trying to work DX in two opposite directions with a signature, consistently strong signal, I guarantee you will be astounded with the results on 40 meters at such a low cost and if modified will work as well on your band of choice!

Upcoming Contests and Events

6-8 December 2013: 160 Meter

Objective: For Amateurs worldwide to exchange information with W/VE amateurs on 160-meter CW. DX-to-DX QSOs do not count for contest credit. Stations located in overseas and non-contiguous U.S. Territories may be worked by DX stations. This includes Alaska KL7, the Caribbean US possessions KP1-KP5, and all of the Pacific Ocean territories KH0-KH9, including Hawaii KH6. These stations can work BOTH domestic stations (US and VE) as well as DX stations around the world.

Contest Starts 2200 UTC Friday, ends 1600 UTC Sunday (December 6-8, 2013). This is a forty-two hour period with no time limitation.

Bands: 160 meters, CW only.

14-15 December 2013: 10 Meter

Objective: For Amateurs worldwide to exchange QSO information with as many stations as possible on the 10 meter band.

Contest starts 0000 UTC Saturday; runs through 2359 UTC Sunday (December 14-15, 2013)

Bands: 10 meters only.

22 December 2013: Rookie Roundup

Mission: To encourage newly-licensed operators ("Rookies") in North America (including territories and possessions) to operate on the HF bands and experience competitive Amateur Radio operating. Experienced operators ("Non-Rookies") are strongly encouraged to participate and help new operators – either on the air or in person.

Objective: Rookies exchange information with as many other stations as possible on the 80, 40, 20, 15, and 10 meter HF bands. Rookie entrants are encouraged to read "[HF Contesting – Good Practices, Interpretations and Suggestions.](#)"

Contest: 1800 UTC through 2359 UTC.

Modes: CW only

You might be a real Ham if,

...you call beers "807s," money "green stamps," your house your "home QTH," your car your "moe-byle," your base station your "shack," the FCC "the friendly candy company," anything a salesman tells you "Bravo Sierra," the big brouhaha at the last club meeting "a Charlie Fox-trot," your wife your "XYL," and your kids "harmonics"!

...you ever flagged down a local utility bucket truck and tried to bribe the guy to hang some ropes and pulleys in the trees in the backyard!

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 26 November 2013

1700 Social 1730 Meeting

Methodist Richardson Medical Ctr
At Bush/Renner/Shiloh Intersection

Second Floor Conference Room 200

NEXT SIGNALS INPUTS DEADLINE:

→→→ 11 December 2013 ←←←