
SIGNALS

**Rockwell
Collins**

Monthly Newsletter of the

Amateur Radio Club

Volume 38 Issue 10

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

August 2017

RCARC Membership Meeting

**Tuesday 22 August 2017
1700 Social 1730 Meeting
1800 Program**

**Methodist Richardson Medical Center
At Bush/Renner/Shiloh Intersection
Conference Room A in Hospital Building**

**Subject:
RCARC Club Shirt Design**

Department Training, patrol their neighborhoods and report all suspicious activities to the Police Department.

Ham Researcher to Investigate Effects of Solar Eclipse

July 18, 2017 by Dan Romanchik KB6NU



August 21 is a once-in-a-lifetime opportunity for many in the U.S. to see a total eclipse. It's also an opportunity for a team of Virginia Tech researchers to study the effects of the eclipse on changes in the upper atmosphere that have an impact on HF propagation and the global positioning system (GPS). Backed by research funding from NASA and the National Science foundation, the team is headed by Dr. Greg Earle, W4GDE.

The Virginia Tech team plans to gather data from a variety of sources, including radar systems, transceivers, satellites, ham radio, and GPS receivers, in order to analyze the effects of the solar eclipse on the conductive region of the atmosphere.

(Continued on page 3)

Local Club News

Meeting Notice

The event for this month's program will be the design of new club shirts. Every member who attends will have the opportunity to suggest ideas for the artwork, So, come to the meeting on Tuesday, 22 August and participate in the design.

RCARC Community Service Activities

Siren Testing Dennis Cobb WA8ZBT, John McFadden K5TIP and Jim Skinner WB0UNI participated in the Richardson emergency siren testing. The testing on 3 August 2017 was cancelled due to overcast skies. The siren testing is performed at 12:00 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. Siren testing occasionally uses the University of Texas at Dallas (UTD) repeater at 145.430 MHz, which is designated as the backup repeater.

Crime Watch Patrol Jim Skinner WB0UNI participated in Richardson Duck Creek Crime Watch Patrol (CWP). CWP members, after successful completion of Richardson Police

RCARC OFFICERS

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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 and VP Messages

See you at the meeting & 73's,
Gene, K1GD
RCARC Vice President

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.

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

Secretary's Report

25 Jul 2017

President Mike Schmit WA9WCC called the meeting to order at 1740.

The following were present at the meeting:

Sam Boren	TBD
Jim Brown	AF5MA
Dennis Cobb	WA8ZBT
Bob Coulbourne	W4FTD
John McFadden	K5TIP
Dick Morgan	K6RAH
Mike Schmit	WA9WCC
Jim Skinner	WB0UNI
Joe Wolf	N5UIC

Officers and Committee Reports:

There were no formal reports other than the Secretary's Report, which is contained in this newsletter. Dennis Cobb WA8ZBT offered an informal treasurer's report indicating continued financial stability.

Old Business:

None.

New Business:

Mike Schmit reminded all of the upcoming solar eclipse visible over the U. S. on 21 August.

Jim Skinner WB0UNI requested member comments on club participation in newsletter exchanges with other radio groups. All comments were positive, and this will be pursued in the future as opportunities arise.

Bob Coulbourne W4FTD discussed available options for designing and acquiring club shirts. Members present seemed receptive to pursuing this, and it was agreed that candidates would be reviewed at the next meeting. Members were encouraged to bring ideas for artwork.

Adjournment:

The meeting was adjourned at 1853.

Ham Researcher to Investigate Effects of Solar Eclipse *(Continued from page 1)*

"Whether military radar, or consumer GPS signals, the eclipse is going to have effects on the medium that we would like to understand better, so that we can either mitigate them or use them to our advantage," said Earle.

Here are a couple of links to news stories on the research team and the experiments:

- [Virginia Tech team prepares for special project during total solar eclipse](#)

- [Virginia Tech expert to study August solar eclipse effects on radar, ham radio, GPS](#)

And, here's another link to an experiment called the "Eclipse Mob:"

- [A massive atmospheric experiment is planned for August solar eclipse](#)

Let's party!

In conjunction with the eclipse, the HamSCI and the ARRL are sponsoring the [Solar Eclipse QSO Party](#). (SEQP). According to an article in the August 2017 issue of QST, the goal of the SEQP is to "flood the airwaves with contacts, all measured by the automated receiver networks of the Reverse Beacon Network, PSKReporter, and WSPRNet." Once all the logs are in, researchers will analyze the data to see what effect the eclipse had on radio propagation.

The SEQP will run from 1400Z – 2200Z on Monday, August 21. This is well before the eclipse is due to begin on the West Coast. The reason it starts before the eclipse is to establish a baseline for radio propagation conditions.

SEQP organizers urge you to make as many contacts as you can on as many bands as you can operate. Like nearly every contest, contacts are not allowed on 60m, 30m, 17m, and 12m. CW, RTTY, and PSK31 are the preferred modes because automated receivers can record those contacts, but phone and other digital modes count, too.

An interesting twist to this contest is that, like Field Day, you can earn a number of bonus points, including:

- Operating outdoors (100 points)
- Operating in a public place (100 points)
- Operating a wide-band automated receiver at your station (100 points)

Hams have had a long history of supporting scientific research. They provided communications for some of the early polar explorations and listened for Sputnik as it flew overhead. The Solar Eclipse QSO Party continues this tradition, and it's going to be a lot of fun as well. Visit the [Ham-SCI website](#) for more information.

When he's not battling the noise floor at his QTH, Dan blogs about amateur radio at [KB6NU.Com](#), writes the "No Nonsense" amateur radio study guides and teaches ham classes. You can contact him by e-mailing cwgeek@kb6nu.com. *(Reprinted with permission)*

A Quick, Simple, Inexpensive Trailer Hitch Antenna Mast

from Joe Tomasone, AB2M on February 20, 2017

Being passionate about emergency communications, I am always looking for ways to extend and improve my mobile/portable emcomm capabilities. However, I also like to be creative and to concoct solutions from items that are

easily obtainable in most areas and less expensive than commercially made counterparts.

Some time ago, I had constructed a J-pole antenna supported by a section of PVC following the design of W2IK, but adding my own twist - adding a threaded connection end to the bottom of the PVC that allowed it to be screwed into another (empty) piece of PVC. This second piece of PVC is then inserted into the top of a telescoping pool pole, making a quick and efficient mast system.



The problem, however, was finding a suitable base. I originally constructed one out of black pipe - but it was rather pricey, very heavy, and prone to rust. I soon realized that there were very few instances in which I would need to place the antenna someplace where my vehicle could not go - and so, I decided to mount it to the trailer hitch.

The only pre-made option I found was a flagpole bracket intended for RV'ers. However, it was not available in local stores, meaning it would need to be shipped. I don't have anything against shipping, but if I need a solution NOW (say, in an emergency), I don't want to have to wait (or be unable to get a shipment - like at an EOC during a disaster). This project includes everything you need (sans antenna and coax) and can be constructed with one visit to Lowe's and about 10 minutes of assembly.

To construct this mount, you will need the following (available at Lowe's):

3/4" Dia. x 36" L Threaded Rod (item #44678, \$10.18)

(4) 3/4" Stainless Steel Flat Washers (Item #137697, 2/pack, 2 packs, \$5.00)

(4) 3/4"-10 Stainless Steel Hex Nuts (Item #137647, 2/pack, 2 packs, \$7.08)

(4) Rubber Grommets 1-1/8 x 23/32 x 5/16 (Item #139378, \$5.08)

Aqua EZ 3-Piece 4'-12' Telescoping Pole (Item #102924, \$17.98)

Total: \$45.32

And, if you don't already have a ball mount that can be used, you'll need one. My hitch receiver is 2", so I used:

2" Drop Interlock Draw Bar (Item #109674, \$19.98)

Total: \$65.30

Assembly:

1. Thread two nuts and two washers on to one end of the threaded rod, far enough up to be able to insert the rod into the ball mount and add the other two washers and screws. (Note: I inverted the ball mount so that the mount rises upwards instead of dropping down.)
2. Insert the rod into the ball mount.
3. Insert one of the rubber grommets around the threaded rod and inside the hole on the ball mount.
4. Add the other two washers and nuts. Tighten all nuts. (Note: Lowe's did not have lock washers large enough to fit this size rod, but since this is a temporary mount that will be assembled every time, I did not bother trying to find any someplace else).



5. Add the remaining 3 rubber grommets over the threaded rod at spaced intervals. They will help dampen any movement of the pool pole. Optionally, you can epoxy these in place.
6. Insert the completed hitch assembly into your receiver and secure with lock pin.
7. Remove the handle from the bottom of the pool pole.
8. Mount your antenna to the top section of the pool pole. For the antenna above, I simply insert the "empty" PVC inside the top section and the threaded connector sits on top of the pool pole's top section, leaving the actual antenna above the pool pole.
9. Slide the bottom of the pool pole over the threaded rod and grommets.
10. Extend the pool pole sections
11. I sprayed some plasti-kote on the assembly both for aesthetics and to help prevent rust. Obviously, you don't want to go crazy on the bottom half of the assembly if you

plan on removing the rod from the ball mount (either for disassembly or to use it with a ball).

12. 3/4" was the largest threaded rod that Lowe's carried. I would have preferred to use 1" (as that is the size of the bolt hole on the ball mount), but I decided that this was a good compromise between complete suitability and easy availability. The grommets help to dampen the sway, which even when I purposely shake the mast (pool pole) is not great.

Here's a photo of the completed mast with the antenna.



(Reprinted with permission from eham.net)

Harvey Houses On-the-Air Special Event

Harvey Houses On-the-Air Special Event Stations will activate many of the 84 historic Harvey Houses each year on the second Saturday of September (in 2017, this is September 9). It would be appreciated if you would bring HHOTA to the attention of your members with the objective of getting a HHOTA Special Event Station operating at each of these Harvey Houses. Please mention HHOTA in your club newsletter and meetings.

You probably know Fred Harvey built and operated Harvey House Hotels and Restaurants (both commonly referred to as Harvey Houses) along western railroads. Texas apparently had the most Harvey Houses with 16: Amarillo, Brownwood, Canadian, Cleburne, Dallas, El Paso, Fort Worth, Gainesville, Galveston, Houston, Rosenberg, Silsbee, Slaton, Somerville, Sweetwater and Temple. There are several Oklahoma Harvey Houses just across the border that Texas Hams may consider activating. HHOTA information is at www.qrz.net/vcara/ which includes links to more information about Harvey Houses and the famous Harvey Girls recruited as staff.

Thank you and 73,
Andrew Eldridge, AE5NM
HHOTA Coordinator

New Mexico's Valencia County Amateur Radio Association is sponsoring HHOTA.

(Contributed by Bob Kirby K3NT)

Upcoming Events

AUGUST

- 19-20 10 GHz & Up – Round 1** North American amateurs 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. Details at <http://www.arrl.org/10-ghz-up>.
- 20 Rookie Roundup—RTTY** To encourage newly-licensed operators ("Rookies") in North America to operate on the HF bands and experience competitive Amateur Radio operating. Experienced operators are encouraged to participate and help new operators – either on the air or in person. Details at <http://www.arrl.org/rookie-roundup>.
- 21 Solar Eclipse QSO Party** The objective of the Solar Eclipse QSO Party (SEQP) is to flood the airwaves with contacts, all measured by the automated receiver networks of the Reverse Beacon Network, PSKReporter, and WSPRNet. The result will be one of the largest ionospheric experiments ever performed. Here's how hams can have a starring role. Details at <http://www.arrl.org/files/file/QST/This%20Month%20in%20QST/August2017/Silver.pdf>.

SEPTEMBER

- 9-10 EME - 2.3 GHz & Up** Work as many amateur stations as possible via the earth-moon-earth path on any authorized amateur frequency above 50 MHz. Details at <http://www.arrl.org/eme-con-test>.
- 9-11 September VHF** For amateurs in the US and Canada (and their 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 the US & Canada (and their possessions) may only work stations in the US (and its possessions) and Canada. Details at <http://www.arrl.org/september-vhf>.
- 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 at 7:00pm on 3541 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

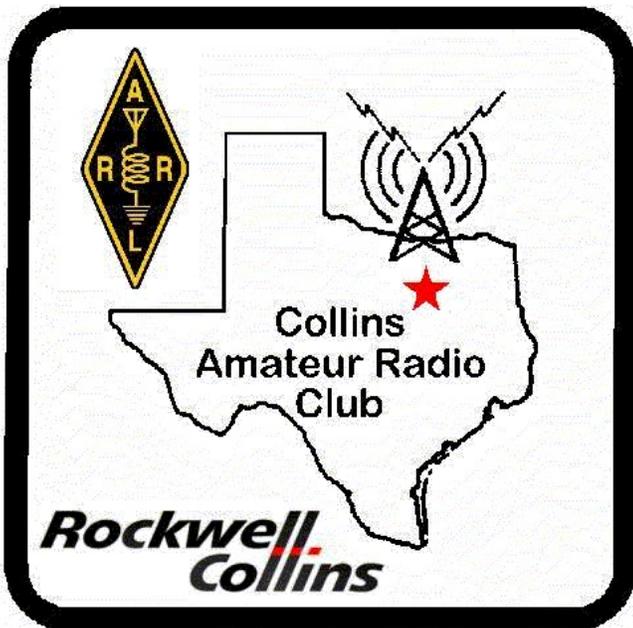
Amateur Radio Club

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 22 August 2017
 1700 Social 1730 Meeting

Methodist Richardson Medical Ctr
At Bush/Renner/Shiloh Intersection

Conference Room A in Hospital Building

NEXT SIGNALS INPUTS DEADLINE:
→→→ 15 September 2017 ←←←