
SIGNALS

Rockwell Collins Amateur Radio Club

Monthly Newsletter of the

Volume 37 Issue 03

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

December 2015

RCARC Membership Meeting

Tuesday 26 January 2016
1700 Social 1730 Meeting
1800 Program

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

Subject:
Program TBD

When you are filling out your Christmas Cards this Year take a Card and Send to this Address:

A Recovering American Soldier
C.O. Walter Reed
Army Medical Center
6900 Georgia Avenue
NW Washington, D.C.
20307-5001



Pass this on and Think of how many Cards these Wonderful, Special People who have Sacrificed so much would get. Please Share on your Wall, it's the Least we can do!

Local Club News

Meeting Notice

The program for January was still in planning when the newsletter was published. Watch for the announcement in the January 2016 issue of SIGNALS. Merry Christmas and Happy New Year to all y'all!

RCARC Community Service Activities

Siren Testing Dennis Cobb WA8ZBT, Chris Havenridge KF5GUN, Frank Krizan K5HS, John McFadden K5TIP and Jim Skinner WB0UNI participated in the Richardson emergency siren testing on 2 December 2015. All sirens tested operated normally. 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.

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.

W5ROK Field Day 2015 Results

The December 2015 issue of QST, page 84, shows that W5ROK placed third out of 20 entries. The results are listed under the 2D classification.

(Contributed by Dennis Cobb WA8ZBT)

Array Solutions Antenna Ordered

The RCARC's Array Solutions Off Center Feed Dipole suggested by Dennis Cobb, WA8ZBT, has been ordered. This antenna will be hung from the repeater tower to support club remote HF operation.



AS-OCF-2K www.arrayolutions.com

(Continued on page 3)

PRESIDENT Chris Havenridge KF5GUN 972.509.8580 chris.dfw.tx@gmail.com	VICE-PRESIDENT Gene Duprey K1GD 319.270.8159 geneduprey2015@gmail.com
SECRETARY Jim Brown AF5MA 972.495.2209 jhsbrown@verizon.net	TREASURER Mike Montgomery WD5TX 972.705.1498 dmmontgo@rockwellcollins.com
ACTIVITIES Bob Kirby K3NT 319.360.0500 k3nt@arrrl.net	WEBSITE MANAGER Mike Hollingsworth W5QH 972.571.6060 w5qh@arrrl.net
STATION TRUSTEE Steve Phillips K6JT 972.517.3332 k6jt@arrrl.net	NEWSLETTER EDITOR Jim Skinner WB0UNI 214.535.5264 wbouni@arrrl.net
MEMBERSHIP Joe Wolf N5UIC 214.202.2757 n5uic@arrrl.net	W5ROK CLUB STATION 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.

SIGNALS is the monthly newsletter of the Rockwell Collins Amateur Radio Club, published by and for its members. The entire contents of this newsletter are copyright © 2015 by the Rockwell Collins Amateur Radio Club. Permission is hereby granted to any not-for-profit amateur radio publication to reprint any portion of this newsletter provided both the author and Rockwell Collins Amateur Radio Club are credited.

President and VP Messages

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.

This space reserved for President and/or Vice-President messages

Secretary's Report

24 November 2015

The meeting was called to order by President Chris Havenridge KF5GUN at 1738.

The following were present at the meeting:

Jim Brown	AF5MA
Dennis Cobb	WA8ZBT
Gene Duprey	K1GD
Chris Havenridge	KF5GUN
Bob Kirby	K3NT
Ken Piletic	W9ZMR
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.

Old Business:

Chris Havenridge KF5GUN reported on discussions with Rockwell Collins (RC) Facilities on various RCARC issues, leading to discussion at the meeting on various subjects. Key points:

RCARC will be invited to future RC safety meetings; Mike Harvey is the designated RC contact for planning and scheduling any work at RC facilities.

Dennis Cobb WA8ZBT mentioned that a microwave (Wi-Fi) antenna installed by an RC contractor was aimed across the ladder to the RCARC antenna; Chris agreed to discuss this with RC in hopes of getting it relocated.

Mike Schmit WA9WCC mentioned that RCARC has an existing memorandum of understanding (MOU) with RC addressing RCARC/RC interactions; Chris will investigate this further.

The RC Veterans Group steering committee will meet December 2. This group sponsors about four events per year at RC, and RCARC has been encouraged to participate.

RCARC will be mentioned at the new RC Site Manager's "All Hands" meeting in January.

Inventory of RCARC assets by Bob Kirby K3NT and Gene Duprey K1GD continues.

New Business:

Joe Wolf N5UIC proposed that the RCARC packet repeater be converted for compliance to APRS standards. Others pointed out issues of crowding on APRS and interruption of current usage. Bob Kirby will discuss options

and concerns with Steve Phillips K6JT and report at the next meeting.

Dennis Cobb began a discussion on remoting of the RCARC station. Bob Kirby proposed subscribing with a local provider for a dedicated wireless access point (WAP) for club use, avoiding any issues with use of RC facilities. This would allow member access to the RCARC K3 from home via Internet. Dennis encouraged that all be done in stages to minimize disruptions to current operations.

Chris Havenridge moved to purchase a Hy-Gain TH2 Mark 2 antenna with supporting coax and fittings for an amount not exceeding \$500. Gene Duprey seconded the motion, and it was approved unanimously by members present.

It was agreed that the club would meet at Spring Creek Barbeque near Firewheel Mall at 6:00 pm on 16 December for the annual dinner in celebration of the Christmas holidays.

Adjournment:

The meeting was adjourned at 1856.

Array Solutions Antenna Ordered

Attached is a link to the antennas manual you might find interesting.

<http://www.arrayolutions.com/Products/AS-OCFDipoleManual.pdf>

A big tip of the hat to Dennis WA8ZBT for presenting a clear and concise overview and drawing at last month's meeting that kicked the remote HF project into motion.

Lots more to be engineered, installed and tested but the club is now off to a good start on this remote HF project.

(Contributed by Bob Kirby K3NT)

First Amateur Radio in Geosynchronous Orbit Will Aid Disaster Communications

Tue, 12/22/2015 - 9:12am by Virginia Tech

Researchers at the Ted and Karyn Hume Center for National Security and Technology are preparing to send an amateur radio transponder into a geosynchronous orbit in 2017.

"Seven days a week, 24 hours a day, 365 days a year, a new ham band will be available for the Americas," said Robert McGwier, a research professor in the Bradley Department of Electrical and Computer Engineering and the Hume Center's director of research. "It will allow rapid deployment to disaster areas and support long-haul communications for first responders."

This would be the first amateur or "ham" radio payload in a geosynchronous orbit, and would significantly enhance communications capabilities for amateur radio operators, in particular following natural disasters or other emergency situations. The Hume Center team met with Federal Emer-

gency Management Agency Administrator Craig Fugate in September to discuss the project.

There are more than 2 million amateur radio operators around the world, and the community has a long history of assisting with emergency communications when traditional communications networks collapse, because they typically rely on cell towers and the Internet. Ham radio signals require only compact, mobile equipment that can be easily transported to an emergency site.

"Hams show up at every disaster, no matter what," said McGwier, referring to amateur radio operators. After events like Hurricane Katrina and the Indian Ocean tsunami, "for days, the only way that people communicated out of those communities was amateur radio."

In fact, the Federal Emergency Management Agency signed an agreement in 2014 with the American Radio Relay League, also known as ARRL, that describes how the two organizations will work together to provide disaster relief, and the Federal Communications Commission has specific regulations authorizing the use of amateur radio in situations which threaten life or property.

But even amateur radio isn't always available.

Currently, most amateur radio operators communicate by bouncing their signals off the ionosphere. Solar flares, geomagnetic storms, and other events that change the condition of the ionosphere can affect the efficiency of radio signal propagation, making it unpredictable.

Sending radio signals to a satellite, instead, would be much more dependable, allowing radio operators to help emergency personnel reliably access supplies, logistical support, and medical assistance. The key is to ensure that the satellite would always be accessible to the radio operators—which is why the geosynchronous orbit is critical.

A geosynchronous orbit has the same period as the Earth's rotation—just under 24 hours. A satellite in such an orbit is easy to locate and access. In this case, the satellite will always be within a band of longitudes over the Americas, continually accessible to any amateur radio operator there, including the students and researchers at the Virginia Tech Ground Station.

The satellite itself will be operated by Millennium Space Systems on behalf of the United States Air Force; the Radio Amateur Satellite Corporation, also known as AMSAT, will operate the radio, which will be designed and built by Virginia Tech students—making this project a unique collaboration among the university, nonprofit organizations, private companies, and the federal government.

The Hume Center team is also engineering a ground terminal that emergency personnel could use to relay their own existing communications channels through the satellite. This setup could be deployed through the American Radio Relay League and the Radio Amateur Satellite Corporation as a key part of a robust national emergency re-

sponse system, allowing trained operators to reliably mobilize to disaster areas in the first critical hours after a devastating event.

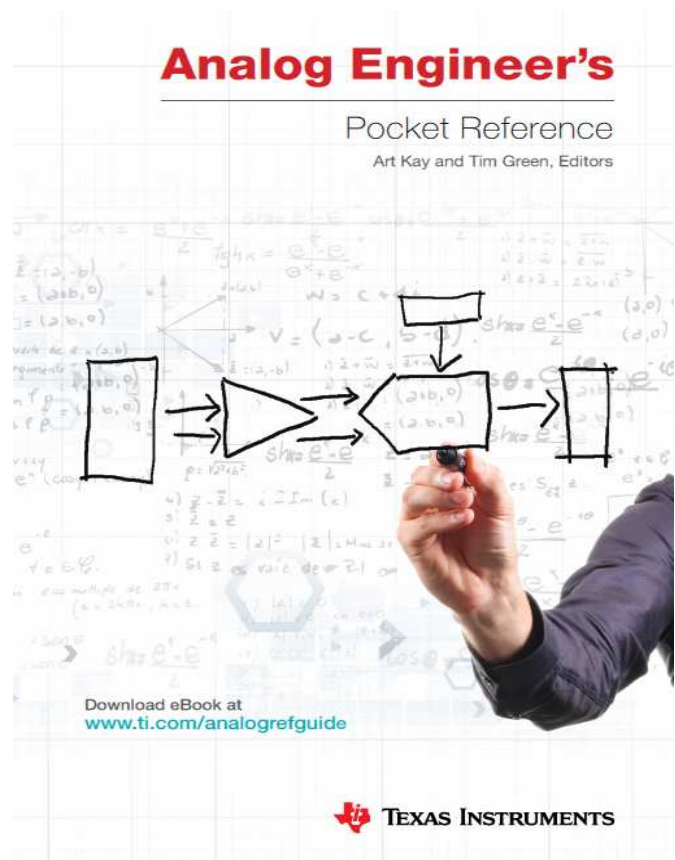
(Contributed Kirby K3NT)

Analog Engineer's Pocket Reference

A very nice and **FREE** TI Analog Engineer's Pocket Reference book is available online.

I downloaded this to my Google Drive so I have access to it most anywhere via my smartphone.

Thanks to Ken W9ZMR and the IL VARA radio club.



The guide is about 100 pages and is in PDF format. If you don't want to print it, just save it to a file for future reference. It is available for download here:

<http://www.ti.com/analogrefguide>

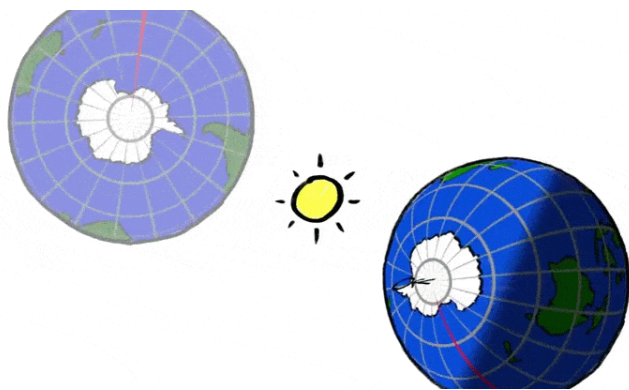
(Contributed by Bob Kirby K3NT)

Why December Actually Has the Longest Days of the Year

Darker doesn't necessarily mean shorter.

By [Eric Limer](#) Dec 22, 2015

Winter comes on the days seem shorter. They're colder, darker, and you barely get to see the sun at all. But they aren't *really* getting shorter. In fact, December actually holds some of the longest days of the year.



Sure, because of the tilt of the Earth, the northern hemisphere gets much less sunlight in the winter than it does in the summer. But [as MinutePhysics explains](#), the time from high noon to high noon is actually as much as 30 seconds longer in December than it is during other parts of the year, thanks to effects caused by the Earth's tilt and its elliptical orbit.

In fact, thanks to an orbital coincidence, the lengthening effects of Earth's tilt and the lengthening effects of Earth's elliptical orbit stack almost directly on top of each other at this point in history. That means today, December 22nd, is actually the *longest* solar day of the year, with an extra 30 seconds under its belt.

Not that that'll make you feel much better when the sun starts setting at like 2:30 PM.

Source: [MinutePhysics](#).

Read the article and watch the video at http://www.popularmechanics.com/space/a18687/why-december-actually-has-the-longest-days-of-the-year/?mag=pop&list=nl_pnl_news&src=nl&date=122315

Upcoming Events

JANUARY

- 1** **Straight Key Night** This 24-hour event is not a contest; rather it is a day dedicated to celebrating our CW heritage. Participants are encouraged to get on the air and simply make enjoyable, conversational CW QSOs. The use of straight keys or bugs to send CW is preferred. There are no points scored. All who participate are winners. The event runs Jan 1 from 0000 UTC through 2359 UTC. More info at <http://www.arrl.org/straight-key-night>.
- 2-3** **RTTY Roundup** Amateurs worldwide contact and exchange QSO information with other amateurs using digital modes (Baudot RTTY, ASCII, AMTOR, PSK31, PSK63, and Packet—attended operation only) on 80, 40, 20, 15, and 10 meter bands. Any station may work any other station. Stations may be worked once per band, regardless of mode. Begins 1800 UTC Saturday, ends 2400 UTC Sunday (January 2-3, 2016). More info at <http://www.arrl.org/rtty-roundup>.
- 30-1** **January VHF Contest** The objective is 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. Begins 1900 UTC Saturday, ends 0359 UTC Monday (January 30-February 1, 2016). More info at <http://www.arrl.org/january-vhf>.

FEBRUARY

- 8-12** **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 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.arrl.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 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

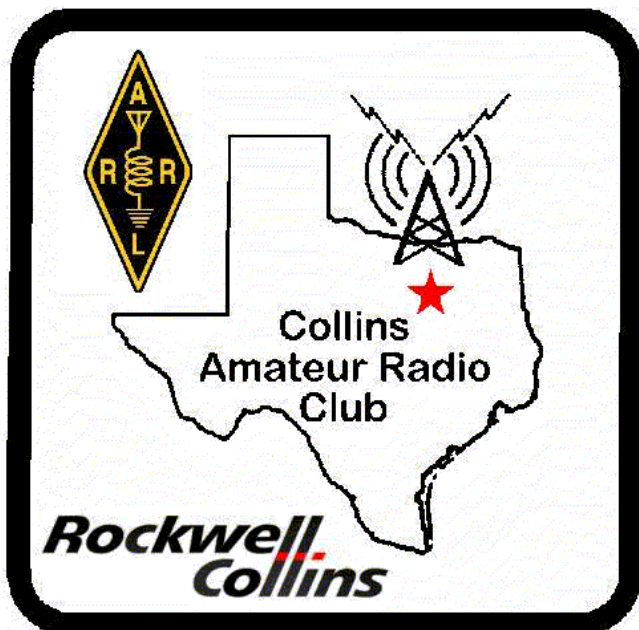
Amateur Radio Club

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 26 January 2016

1700 Social 1730 Meeting

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

NEXT SIGNALS INPUTS DEADLINE:

→→→ 15 January 2016 ←←←