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# SIGNALS

Rockwell  
Collins **Amateur Radio Club**

Monthly Newsletter of the

Volume 32 Issue 8

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

May 2011

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## RCARC Membership Meeting

Thursday, 26 May 2011  
1700 Social      1730 Meeting  
Program 1800

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

**Subject:**  
**HSMM-MESH (High Speed Multimedia)  
NETWORKS**  
by Rusty Haddock , AE5AE

is currently co-hosting the Digital Tuesday SIG (Special Interest Group) of PARK with Kip Moravec, AE5IB, to get more people interested and active with HSMM-MESH.

Rusty Haddock / AE5AE, Lives near Van Alstyne in Grayson County. His hobbies include the 4 R's -- computeRs, Radios, Rifles, and Railroads. He likes dogs, tolerates cats.

**Quick Field Day Update** Field Day (June 25-26) is fast approaching! We need your help to make this event a success.

The plan is very similar to last year but we hope to improve our score and ranking in the E-3 category. We have been working long hours to get all our radios, computers and antennas all tested and ready for use. We even have a new "secret weapon" that Dennis Cobb has been building: a triplexer that should let us run all three stations on the beam at the same time. This should help us rack up the QSO's much faster during the day when 10, 15 and 20 are likely to be booming. We are intending to run at least three modes, voice, CW and PSK-31 so everybody can get a chance to do some operating.

Setup for Field day will start about 10:00 AM on Saturday Morning. Operation starts at 1:00 PM local time and runs for 24 hours until Sunday 1:00 PM. Cleanup will take a few hours once we are done. We are also planning a meal on Saturday evening starting at about 7:00 and we need folks to RSVP so we know how many to plan for. We are welcoming club members and their families to the meal so please let us know if you are planning to attend and how many people you are bringing with you.

We do need folks to sign up to help operate the station. We are planning to operate in three shifts of 8 hours each this year, but even if you cannot commit to a full 8 hours we need you to sign up by letting Bob ([KC4UAI@GMAIL.COM](mailto:KC4UAI@GMAIL.COM)) know or by putting your name on the sheet that will be passed around at this months meeting. There are three operating shifts and a setup and cleanup "shift" and we need folks to sign up and help us. This year we don't want to have our station go silent, and try to keep our three radios on the air as much as possible for the full 24 hours. This will take a lot of operators to commit to helping out.

**Pilot praises our company's HUD/EVS** — A test pilot flying a Dassault Falcon 7X business jet, which is equipped with our company's Head-Up Display (HUD) and enhanced vision system (EVS) praised the solution's "huge safety and operational benefits" in a recent [Flight International](#) cover story. (Cont. on page 4)

## Local Club News

**Meeting Notice** Please plan to attend the RCARC membership meeting this month, as we have been having a good turn out at the meetings this year. Our program for this month's meeting is: **HSMM-MESH (High Speed Multimedia) NETWORKS**. The program will be presented by Rusty Haddock, AE5AE at about 6:00pm. HSMM-MESH™ is a high speed, self discovering, self-configuring, fault tolerant, wireless computer network that can run for days from a fully charged car battery, or indefinitely with the addition of a modest solar array or other supplemental power source. The focus is on emergency communications. Equipment used is modified 802.11 wireless routers operating in the ham bands. Please invite a friend to hear this interesting presentation. The following is a short bio on Rusty.

Rusty was licensed as KD4WLZ from 1993 - 2007, when he took the General exam and, after passing, immediately took the Extra exam on a dare. No one has dared him to do anything since.

Rusty has worked for a wireless mesh company in Richardson and became very interested as well as active with the HSMM-MESH development in Austin, since KD5MFW's HAM-COM presentation in 2009. He has presented at the three webinars on HSMM-MESH in Lucas and is working on HamCom 2011. Rusty

### RCARC OFFICERS

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**W5ROK**

461-290

### VE SESSIONS

**Dallas** tests are held 4<sup>th</sup> Sat of each month at 10:00. 13350 Floyd Rd. (Old Credit Union) Contact Bob West, WA8YCD (972) 917-6362

**Irving** tests are held 3<sup>rd</sup> Sat. of each month at 09:00. 5<sup>th</sup> 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 14:30, ending no later than 16:45. **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 Bill Reynolds, K8DNE, 972-475-3854.

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

**Greenville** testing is on the Saturday after 3<sup>rd</sup> Thursday, 1000 hrs at site TBA, contact N5KA, 903.364.5306. Sponsor is Sabine Valley ARA. Repeater 146.780(-) with 118.8 tone.

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### President's Message

**HSMM-MESHNET** W5ROK now has 3 nodes operating 24 hours/day to support the NTX HSMM-MESHNET project. HSMM W5ROK-N2 supports a mini-web server that currently serves the local weather from our W5ROK WX station. Please come out and listen to this month's speaker Rusty Haddock, AE5AE to learn more.

**Fun Days** Thanks to all the members who supported the 2011 Rockwell Collins Richardson Fun Days.

**2011 Richardson Wild Ride** W5ROK provided HSMM-MESHNET support to download pictures along with voice support from rest stop #4. Many club members were involved with setting up our three nodes. The day's event was supported from 5:30AM till past 7 PM by RCARC members Chuck K7NWM, Ross K5SRT and Bob K3NT. Juanita KD5PXN did a super job of sending rest stop #4 voice status back to net control. W5ROK also had a portable HF setup and many stations were worked on twenty meters. One of the locals, that was worked during the event, came by to see the operations. It was easy to spot us as we were flying the large W5ROK Rockwell Collins Amateur radio club banner.

**May Station Improvements** I have lost count of the many work parties that were held this month. I do remember leaving a few of them with Bob K3NT close to midnight. The MFJ antenna has been safely taken down and is in the K5MDK antenna hospital for repair. Paul KC0TEG has completed the overhead cable trays in the station—this will really help us with RF and control cable routing between the two operating positions. RCARC needs a leader and crew to install the new solar shield with temperature /humidity sensor—Please help.

**Field Day** Please lend your support to Bob KC4UAI for the 2011 W5ROK field day operations. There is much work that needs done even if you are not planning to attend operations or the evening meal.

**Retiree Access** Even though we are working present issues requiring retiree escorts to the W5ROK station, please continue to help your club in other 'off-site' ways.

**SIGNALS Inputs** Jim Skinner WB0UNI needs more articles for SIGNALS. Please consider sharing your years of knowledge and writing some short technical articles. And please try to provide them in a timely manner, to ensure the newsletter is published about one week before the monthly meeting, as has been the tradition.

**Club Projects** Coordination and leadership is needed on many pending club projects. Please contact one of the officers to find the perfect project that has been just waiting for your knowledge and experience to get it moving.

Till next month, 73 from Ross, K5SRT  
[k5srt@arrl.net](mailto:k5srt@arrl.net)

### Secretary's Report April 28, 2011

A regular monthly membership meeting was held on April 28th at the Richardson Methodist Medical Center Bush Renner campus

in the 2<sup>nd</sup> floor conference room. Those in attendance were as follows:

1. Charles Beis - K5UWD
2. Ira Blum - K5IRA
3. Loney Duncan – W0GZV
4. Wayne Hughes – WA0TGH
5. Michael Ketchum - K5MDK
6. Bob Kirby - K3NT
7. Steve Phillips - K6JT
8. Dwight Ramsey - KE5SAS
9. Chuck Samuel - K7NWM
10. Mike Schmit - WA9WCC
11. James Skinner – WB0UNI
12. Richard Strnad - AA6DV
13. Ross Terry - K5SRT
14. Joe Wolf - N5UIC

This represents 11 Regular, 1 Life, 1 Associate and 1 non-member.

### 1. Opening

Ross Terry – K5SRT, the club President, opened the meeting at 17:31 with a flag pledge. A round of introductions by all of those in attendance was completed. Each attendee was asked to present what they were doing with the hobby of late.

### 2. Calendar of Events and Announcements

Loney Duncan, W0GZV, made an announcement about Leo Meyerson, W0GFQ. Mr. Meyerson, of Omaha, Nebraska, passed away on Wednesday, April 13<sup>th</sup>. He was 100. In 1935, Meyerson, an ARRL Life Member, founded Wholesale Radio Laboratories -- the forerunner to World Radio Labs -- in Council Bluffs, Iowa. For his contributions to Amateur Radio, Meyerson was named the 1997 Ham of the Year at the Dayton Hamvention.

### 3. Officer Reports

There were no officer reports made at this time.

### 4. Old Business

There were several items discussed in OLD BUSINESS:

- a. Ross, the club President, reported that the Temperature and humidity sensor with the solar shield has arrived. The installation of this new array is in the works.
- b. Ross, the club President, reported that a new PC has been installed with Windows XP for the Kenwood station. This provides us with three main stations, each with their own PC. The Collins station does not need a PC at this time. This new PC at the Kenwood station is also being currently used to record weather station data from the new weather station. It is hoped to get an internet connection established that will enable the weather data, collected by our weather station, to be shared through APRS and other weather outlets.
- c. Ross, the club President, reported that W5R0K was able to participate in a SkyWarn net. The station reported “measured” values to the weather net under condition level 4. During one such net, a spotter in Sachse reported a wind gust that exceeded our report. You may remember that a wind gust of 45 mph was recorded within one hour of a work crew working on the roof of the building to repair the MFJ IT antenna.

- d. Bob Kirby – K3NT reported the status of the “IT” antenna.
- e. Bob Kirby – K3NT also reported on behalf of Dennis Cobb – WA8ZBT, regarding the status of the triplexer, saying that Dennis now has all the parts except for three new band-pass filters. These were not purchased because the specifications on our existing filters exceeds those of the filters from the same company that produces the plans for this triplexer. There was discussion regarding the authorization given by the membership at the last meeting to purchase the band-pass filters. It was determined that Bob Diepenbrock – KC4UAI, was tasked with making this purchase. In any case, there should be an effort to replace these three filters for other regular band-pass filter use in the future.
- f. Ross, the club President, reported on the teamspace “tasks” list. This list contains all of the individual tasks that are needed to be completed for normal station operation and for Field Day. Some of the items were not assigned to anyone. Ross asked for volunteers to contact him for more details.

### 5. Events

- a. Ross, the club President, announced several of the upcoming events. These events can also be found in the April 2011 edition of the **Signals** newsletter.
- b. A question was brought up by Michael Ketchum – K5MDK, club secretary, regarding a location for the club lunch after the Siren Test, next Wednesday. After some discussion, Dickey’s BBQ was chosen.
- c. Michael Ketchum, club Secretary, announced the work day on May 14<sup>th</sup> at 9:00am. Bob Kirby – K3NT described a tall fiberglass antenna (approx 30 feet in height) located on the roof with cables running inside the building, close to the club station, that might be useful for Field Day 2011 operation. There is a large tuner assembly next to this antenna, but the Rockwell Collins specs may not be locatable.
- d. Ross, the club President, reminded everyone about the Richardson Wild Ride! This event is on May 21<sup>st</sup>. Ross also mentioned that this event is sponsored by the Methodist Richardson Medical Center, who provides us this wonderful meeting place each month. One of the rest stops will actually be located on this property. Ross recalls this is usually Rest Stop #4.

### 6. New Business

There was only one item of new business. James Skinner – WB0UNI, requested that the club purchase a new copy of Adobe Acrobat. He has recently upgraded the operating system on his PC and the older version does not work—a newer version is necessary. At Ross’ initiation, there was no objection to making this purchase. James expects the software will cost less than \$150.00. With that, all was in agreement to approve this purchase.

### 7. Presentation

Ross introduced Wayne Hughes – WA0TGH as club Webmaster. Wayne prepared a Community of Practice presentation that deals with the topic of networking and ham radio. The presentation began at 6:18pm.

**8. NOTE**

Joe Wolf – N5UIC, video streamed this presentation LIVE on the internet. A stored version of this presentation is accessible at <http://www.ustream.tv> Simply enter the search word “W5ROK” to find the club page. Previously recorded material will also be posted at this same club page. A word of thanks to Joe for his help.

**Pilot praises our company’s HUD/EVS** —(Cont. from page 1) In the article, the pilot discussed his night-time test flight, in which he realized night flying is “as safe and easy as flying the aircraft in daytime, good-visibility conditions” when relying on our HUD/EVS rather than a head-down display. He also described the confidence he felt flying with our HUD and referred to himself as a “HUD junkie” just minutes into his flight.

In the same issue, another article highlighted Rockwell Collins as the first to market a true low-cost, compact HUD – the HGS-3500 - which our company unveiled last week. *Source: Thursday, April 28, 2011 — Today at Rockwell Collins (Submitted by Bob Kirby K3NT)*

**Cellular network provides crucial communications service in Afghanistan** — As a systems integrator for the U.S. Army’s emergency cellular network in Afghanistan, our company is helping combat one of the Taliban’s most recent weapons – control of local cellular service.

According to Don Hartman, a technical project manager in Surface Solutions Engineering, people in several areas of Afghanistan lose local cellular service every evening as part of a rule implemented by the Taliban to control cellular network operation.

“The Taliban terrorizes local providers into shutting down their networks at night,” explained Hartman. “This allows the Taliban to conduct operations without fear of a local anonymous call to warn coalition forces. It also prevents the Afghan people from being able to contact help during an emergency, like a fire.”

The Army’s network interfaces with local cellular networks to provide an alternate network for use by local citizens and coalition and U.S. government forces when existing cell phone network coverage is unavailable.

Employees in Cedar Rapids, Iowa, and Duluth, Ga., worked together to design, develop and test the Army’s network, while also providing electronics hardware, repair management and in-country field support. Additionally, our company’s MaxView Network Management System will be used to provide overall system status monitoring. *Source: Tuesday, May 3, 2011 — Today at Rockwell Collins (Submitted by Bob Kirby K3NT)*

**Can A Transistor Crank Like A Tube?** *April 28, 2011 Source: Microwaves & RF* High power for transmitters—whether they be in space, on ground, at sea, or airborne—often still comes from vacuum-tubes. Transistors now provide realistic alternatives, however. A special report in the April *Microwaves & RF*, “[Transistors Energize Solid-State Amplifiers.](#)” details some of the device technologies that are generating the highest power levels, including gallium nitride (GaN), silicon carbide (SiC), and good old-fashioned silicon, in the form of laterally diffused metal-oxide-semiconductor (LDMOS) transistors. The article also explains what to expect at different frequencies, such as 140 W CW

through 3 GHz for GaN transistors, and what different solid-state devices can do in pulsed operation, as in radar systems..

**Boeing CEO discusses key program progress during earnings call** — Boeing CEO Jim McNerney yesterday discussed several programs of interest to Rockwell Collins, including the 787 Dreamliner, 747-8 and KC-46A tanker, during the company’s quarterly earnings call.

According to McNerney, 787 flight tests are nearing completion, with first delivery still set for the third quarter of this year. Test flights for the 747-8 are 75 percent complete, with first delivery of the 747-8 Intercontinental planned for the end of this year. McNerney said the company is seeing renewed interest in this “efficient and highly capable airplane.”

On the defense side of the business, McNerney mentioned the U.S. Air Force’s NewGen Tanker (KC-46A) win as a “key highlight” during the first quarter.

Our company serves as the systems integrator for the 787’s flight deck display, crew alerting, communication and surveillance systems, as well as for pilot controls and the core network cabinet. Rockwell Collins also provides the common data network for the 787’s Common Core System. The 747-8 is equipped with our displays, communication, navigation and surveillance systems.

Additionally, we are providing the displays; communication, navigation, surveillance/air-traffic management (CNS/ATM) equipment; aircraft networks; and situational awareness capabilities for the NewGen Tanker. *Source: Thursday, April 28, 2011 — Today at Rockwell Collins (Submitted by Bob Kirby K3NT)*

**Events and Public Service Ops**  
**10 June 2011: W5DXCC Dinner and Activities.**  
See page 6 for details on this event.

**10-11 June 2011: HAMCOM.** See page 5 for more information on this event. The complete brochure can be viewed and printed at <http://www.hamcom.org/brochure.cfm>.

**11-13 June 2011: June VHF QSO Party.** The objective of this event is to work as many amateur stations in as many different 2 degrees by 1 degree grid squares as possible using authorized frequencies above 50 MHz. Foreign stations work W/VE amateurs only. **Date and Contest Period:** The second full weekend in June. Begins 1800 UTC Saturday, ends 0300 UTC Monday (**June 11-13, 2011**). More info at <http://www.arrl.org/june-vhf-qso-party>.

**25-26 June 2011: Field Day.** The objective of this event is to work as many stations as possible on any and all amateur bands (excluding the 60, 30, 17, and 12-meter bands) and to learn to operate in abnormal situations in less than optimal conditions. Field Day is open to all amateurs in the areas covered by the ARRL/RAC Field Organizations and countries within IARU Region 2. DX stations residing in other regions may be contacted for credit, but are not eligible to submit entries. Field Day is always the fourth full weekend of June, beginning at 1800 UTC Saturday and running through 2059 UTC Sunday. Field Day 2011 will be held June 25-26, 2011. Detailed info is available at <http://www.arrl.org/field-day>.

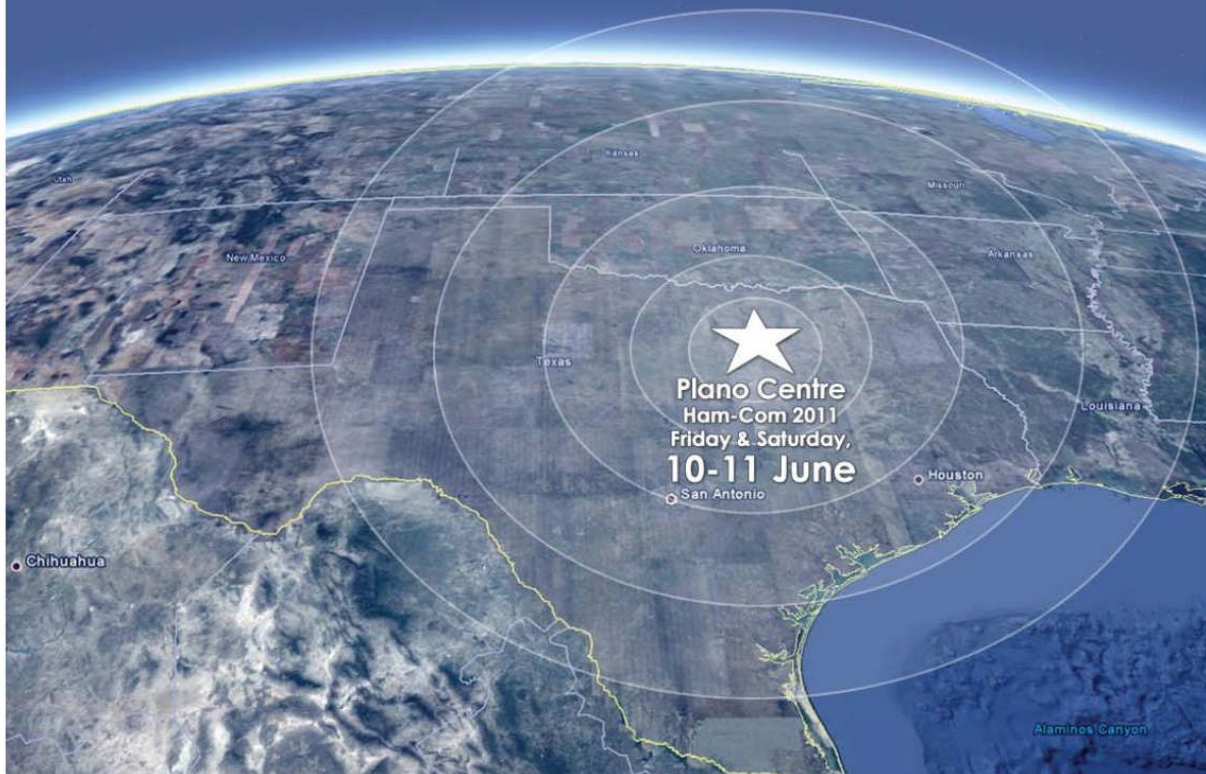


# 2011 HAM-COM CONVENTION

Plano Centre Friday & Saturday, 10-11 June

## Amateur Radio at its best

Commercial Exhibitors | Flea Markets | Speakers | Workshops  
Special Interest Groups | Door Prizes | And Much, Much More...





# The 2011 W5DXCC Dinner and Activities

## Friday June 10 2011 6pm

Collin Community College, 2800 E. Spring Creek Parkway, Plano, TX 75074  
(Conference Center entrance, NE corner main building)



The dinner will be a Texas BBQ of chicken and brisket accompanied by the usual sides and dessert.



Our speaker will be DX Hall of Fame'r Don Greenbaum, N1DG who will tell of the hardy team that recently activated Signy Island in the South Orkney group.

We will also be treated to brief remarks from Kay Craigie, N3KN, ARRL President and Rick Hollingsworth, K4ZDH, former Special Counsel for the FCC Enforcement Bureau.

As in prior years there will be an informal gathering after the dinner at Abuelo's, 3420 N. Central Expressway, Plano, TX 75075, chips, dips and happy hour pricing.

### There will also be drawings for some great door prizes at the dinner.

*Note: Must be present to win door prizes and must have also bought a dinner ticket*



Alpha 4510 Wattmeter, 200mW—3kW



Graciella Junior paddles in Palladium finish.



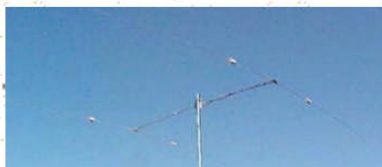
The 2011 W5DXCC Dinner and Activities(cont)



RigExpert model AA54 antenna analyzer.



Force12 Delta240, 2 ele 40m compact yagi.



Yaesu FT-2000 HF/6m transceiver.



**Ham-Com 8:00 am Saturday June 11 2011**  
**Plano Centre, Northbrook Room # 1**  
 (Order subject to change)

- **CY0 Sable Island 2011**, by Randy Rowe, N0TG
- **PJ6A Saba Island 2010** by Tim Pearson, K5AC
- **Contesting from Iceland**, by Richard King, K5NA
- **Future of High cost DXpeditions** by Don Greenbaum, N1DG

DXCC and 160M DXCC card checking by Mike Krzystyniak, K9MK and his crew will be available at the LSDXA booth Friday (preferred) and Saturday..

Dinner tickets are priced at \$39 per person and may be ordered from Rick N0RB. Make your check payable to "Lone Star DX Association" and mail to:

Rick Barnett, 657 Oakdale Dr., Plano, TX 75025.

If you want a vegetarian meal please include a request with your ticket order.

Tickets may also be ordered via [Ham-Com](#)

Tickets must be ordered by **May 30th**.

All tickets are to be picked up at LSDXA booth.



# 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

145.01 MHz

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

Thursday, 28 May 2011

1700 Social      1730 Meeting

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

**NEXT SIGNALS DEADLINE:**

**→→→ 11 June 2011 ←←←**