# SIGNALS Rockvell Monthly Newsletter of the Collins Amateur Radio Club

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Volume 30 Issue 8

Web Site http://www.w5rok.us

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**May 2009** 

# RCARC Membership Meeting

Thursday, 21 May 2009
1700 Social 1730 Meeting
Rockwell Collins Building 462
Dallas Conference Room

Subject: What happened to Amelia Earhart?, by Rod Blocksome, and Field Day Planning

# **Local Club News**

**Meeting Notice** We will be having a very special meeting this month. Please note the change of date and meeting location. We are "piggy-backing" our meeting on a special event sponsored by the RCLA. See page 5 for details. This will take the place of our regular May 28th monthly meeting. We will not have a business meeting this month. You are welcome to send along RCARC business activity to any of the club officers and we will provide a member e-mail broadcast if necessary. Come prepared to talk some about Field Day too.

**Meeting Location** We will be meeting in the Dallas conference room for this special meeting. We will return to the Temple conference room for the June meeting.

**Club Meeting Talk-In** Each month, on the night of the membership meeting we have a Talk-In on the club repeater. The Talk-In this month is 1630 to 1700 hours, prior to the meeting.

**RCARC Members in the News**. On page 94 of the June 2009 QST is a reference to John Champa, K8OCL, concerning his contribution to the *ARRL VHF Digital Handbook*. Also in the same edition, starting on page 47 is an article by Phil Salas, AD5X.

**"Service to Others".** During the April 24<sup>th,</sup> 2009 weekend Boy Scouts of America (B.S.A.) Troops from **Lone Star District** (which included the Texas cities of McKinney, Anna, Melissa, Blue Ridge, Princeton and Farmersville) held its first ever Camporee at Sycamore Bend Park on Lake Lewisville. The theme for this event was "Service to Others" and included more

than 225 Scouts and Adults from around the Circle Ten Council. Scouts service included work to reclaim Sycamore Bend Park in the Town of Hickory Creek on Lake Lewisville which had been closed after flooding more than a year ago.

Rockwell Collins Amateur Radio Club W5ROK was in service to others as well via a tent operated HF/UHF station setup near its central base of operations. Other Amateur Radio operators at the camp included local area CERT members who keep a watchful eye on the weather and were ready to provide field support for Scouts in need. The Camporee 2009 central base included an 80M Dipole coupled with an MFJ Antenna Tuner (thanks to K3NT) along with a truck battery powered HF/UHF ICOM 706 (thanks to K5SRT). Scouts observed and talked on the air during the event with assistance of operator S. Ross Terry (K5SRT) an Assistant Scoutmaster (ASM) of Troop 531.

National Hurricane Center's WX4NHC Sets On-The-Air Station Test. The annual WX4NHC Onthe-Air Station Test from the National Hurricane Center (NHC) in Miami takes place Saturday, May 30, 1300-2100 UTC. "The purpose of this annual Station Test is to test all of our radio equipment, computers and antennas using as many modes and frequencies as possible. This is not a contest or simulated hurricane exercise. New equipment and software will be tested, and we will also conduct some operator training," said WX4NHC Assistant Amateur Radio Volunteer Coordinator Julio Ripoll, WD4R.

Ripoll said that WX4NHC also will be testing new computers and software, as well as conducting operator training. "NHC Director Bill Read, KB5FYA, will be at WX4NHC, making contacts," he said. WX4NHC will be on the air on HF, VHF and UHF, plus 2 and 30 meter APRS. Suggested SSB frequencies are 3.950, 7.268, 14.325, 21.325 and 28.525 MHz, +/-QRM; WX4NHC reports that they will mostly be on 14.325 MHz and will make announcements when they change frequencies. WX4NHC also will be on the VoIP Hurricane Net 1700-1900 UTC (IRLP node 9219/EchoLink WX-TALK Conference) and on South Florida area VHF/UHF repeaters and simplex; APRS and e-mail will also be monitored.

Stations working WX4NHC exchange call sign, signal report, location and name plus a brief weather report, such as "sunny," "rain" or "cloudy." Non-hams may submit their actual weather using the On-Line Hurricane Report Form. QSL to WD4R and include a self-addressed, stamped envelope. Do not send cards to the NHC. Due to security measures, no visitors will be allowed at NHC during the test. (Courtesy ARRL.org)

K5SRT

#### RCARC OFFICERS

K3NT

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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**

Hope you had the opportunity to attend our May special meeting with CARC member Rod Blocksome speaking on his involvement in performing technical analysis in an effort to locate Amelia Earhart's airplane in the deep ocean near Howland Island. He has donated his spare time over the past ten years to this project. Rod participated in two deep ocean search expeditions to the remote Pacific, each lasting two months. He told a fascinating story of how science and technology is being applied to solve one of the most enduring mysteries of the 20th century: What happened to Amelia Earhart?

Thanks and a tip of the hat to member Bob Diepenbrock, KC4UAI, who has stepped forward to fill the vacant treasurer slot. FB Bob.

The RCARC activity chairman position is still vacant. Please advise an officer if you have interest in filling this position.

Thanks to members Kathy Cobb and Dennis Cobb, WA8ZBT, for installing additional grounding to help reduce the wide-band noise occurring on the lower HF bands in our W5ROK club station. As previously reported, this noise is coming from a new energy controller installed for an air handler in the same pent-house where our main HF/VHF/UHF antennas are located.

W5ROK Repeater maintenance still needs volunteers. Our packet BBS issue is priority. Lend a hand if you can.

I was fortunate to attend the 2009 Dayton Hamvention for a day with long time fireman brother Doc, KA3UEQ, and was amazed by the number of folks in attendance. Significant numbers of young ladies and junior operators were noted and this was a pleasant surprise. I spoke to a few of the younger hams and took note of their particular interest in digital operations. Growing D-Star interest and activity was also noted. The lines at the major vendors were constant six to seven people deep with no signs of letting up. I decided to wait until HamCom next month to view the newer equipment.

As for the flea market, I observed an interesting reduction of computer stuff. Mostly, the tables and surrounding grounds were filled with old and new radio gear of all sizes and types. And lots off it, as far as my eyes could see. As my return to Dallas included flying and not driving back from WPA, I purchased only a few small items deciding instead to spend most of my time visiting with various operators I had met on the air over the years. Our RCARC recording expert, Ken Piletic, W9ZMR was there with his friends, Jon, KD5II and Jeannine Zellmer, W5MEW (Yes. Jeannine really likes cats). Also spent time with Ed Patla, his daughter and her two teenage sons. My long time friend George, K3GP was spotted actually working at DX engineering. What a great gig me thinks. I did not get to eyeball with our past APRS speaker Robert E Bruninga, WB4APR. However, I did get to look over his homebrewed solar assisted powered vehicle in the flea market. This is the car that he spoke to our club about after his presentation this past year. Bob had interesting descriptive signs about his energy conversions at a number of locations on his vehicle.

Having other business to take care of, I reluctantly left for WPA on Saturday afternoon after a too brief stop at the Mega-Mart surplus store Mendelsons liquidation center in downtown Dayton. <a href="http://www.mendelsons.com/the-story.html">http://www.mendelsons.com/the-story.html</a>

Eight floors of stuff. Doc, KA3UEQ, bought a complete laser level 360 degree platform with tripod and case for \$13.00 and even the batteries were included.

On the way back, our lunch stop was at the famous Schmidt's Restaurant und Sausage Haus - located in an historic brick livery stable and serving since 1886 in historic German village, Columbus, Ohio. www.schmidthaus.com

Of course, our feast included the "Bahama Mama" along with two large cream puffs to go as a piece offering so Doc could get back into his house with his new radio treasures and FB 360 degree laser level including tripod, case and batteries.

Driving back to WPA, I would put out a call on the various repeaters and then it happened. Small World. K3NT de WB4APR. Well Bob and I talked for over two hours using various Ohio repeaters and finally simplex as he caught up to our vehicle. So, I also got to see the solar assisted powered vehicle in motion along with receiving a nice tutorial on Bob's current work with TT APRS. Curious? Then see: <a href="http://www.aprs.org/dayton/Dayton-Pilgrimage.txt">http://www.aprs.org/dayton/Dayton-Pilgrimage.txt</a>

#### **April RCARC Activities:**

- RFI Reduction Station work Kathy Cobb & Dennis Cobb, WA8ZBT
- Vice President Report Sidney Ross Terry, K5SRT
- W5ROK contest operation.- Dennis Cobb, WA8ZBT
- Meeting Refreshments Setup Volunteer Jim Skinner, WB0UNI (more helpers please)
- RCARC Roster/Database/Applications/Marketing Joe Wolf, N5UIC
- Station Tour Bob Kirby, K3NT, Dennis Cobb, WA8ZBT
- RCARC Digital project Robert Diepenbrock, KC4UAI; Bob Kirby, K3NT
- Yet Another Great SIGNALS Newsletter Jim Skinner, WB0UNI
- Treasurers Report Jim Skinner, WB0UNI
- Club Librarian Stephanie Keese, AC5NF
- Website Updates Wayne Hughes, WA0TGH
- April Program RCARC Attending Members
- Secretary Report –Dwight Ramsey, KE5SAS
- Station Trustee Steve Phillips, K6JT

Hope to see or hear you at the meeting, Best Regards (73), Bob Kirby, K3NT K3nt@arrl.net http://w5rok.us

# **Secretary's Report**

Ross Terry (K5SRT) opened the meeting at 1730 (April 23, 2009), in the Temple Conference Room with the Pledge of Allegiance. Present at the meeting were:

Dennis Cobb WA8ZBT Robert Kirby K3NT Dwight Ramsey John McFadden K5TIP K5SAS Chuck Samuel K7NWM Mike Schmit WA9WCC Jim Skinner WB0UNI Bill Swan K5MWC Ross Terry K5SRT Joseph Wolf N5UIC

#### 1. Officer Reports

President's Report: Bob K3NT indicated that he had discussed with RC Human Relations the W5ROK's community activities, financial institutions and this year's financial expectations. HR was impressed and Bob will be provid-

ing HR with tours of the W5ROK shack in the near future. A consensus of meeting attendees strongly indicated that the club must be more aggressive in supporting the various internal employee recreational activities and external community activities in the future. Bob plans to meet with Homer Birdine to enlist his help in obtaining the company's contribution to the club as soon as possible. Bob (K3NT) communicated that the Elecraft K3 was still in evaluation by members in the club. Bob is managing this testing activity and should be contacted by interested parties.

- b. Vice-President's Report: Ross Terry K5SRT suggested that everyone start thinking about how we plan to support Field Day this year. One item still open is whether a 75<sup>th</sup> anniversary T-shirt might be agreed upon and available by then. Discussion was that it might be wise to proceed without total agreement from all of our sister clubs. Kirby has action to check with the company's employee apparel group to obtain Logo support and interest. Ross also shared his impressions of his trip to the Belton Hamfest
- c. Secretary's Report: Dwight Ramsey, KE5SAS. The report was accepted without comment as published in the February Signals newsletter.
- d. Treasurers Report: Jim Gaston KD5GYD, was unable to attend. There was no Treasurer's Report.
- e. Station Trustee's Report: Steve, K6JT, was unable to
- f. Activities Chairman Report: There was no Activities Chairman report, as John Champa, K8OCL, was unable to attend. John has resigned the position and a replacement Activities Chairman is needed.

#### 2. Old Business

a. Sale of Old Equipment: The club is considering selling specific Collins equipment in the shack but is unable to proceed, with the issues being asking price and the method of promoting the sale.

#### 3. New Business

a. Treasurers Position: Kirby K3NT, said Bob Diepenbrock KC4UAI, has volunteered for the open Treasurer position. It was motioned and seconded that Bob should fill this position until the end of the treasurer current term. The attendees unanimously accepted the motion.

The meeting concluded with each member relaying their current interests and activities to the group.

**Regen Receiver Kit.** With the advent of Solar Cycle 24, many radio clubs, or group of clubs are gearing up their community involvement, and youth based radio orientation programs. Hendricks QRP Kits <a href="http://www.qrpkits.com/">http://www.qrpkits.com/</a> gained permission from Charles Kitchin (N1TEV) to offer his popular regenerative receiver in kit form, and is being released at Dayton this year.

Kitchin's design provides a basic regenerative shortwave receiver capable of receiving AM, SSB, and CW signals from 3mHz to 11mHz. The coverage enables the listener to hear amateur radio operators in the 80m, 40m bands, and foreign AM broadcast stations in the 49m and 31m bands.

Dan Tayloe (N7VE) adapted his design to a small, self contained, unit that is easily assembled with normal low cost tools. It is a basic, easy to assemble kit, with all the components sup-

plied. The metal chassis, front panel decals, professionally fabricated, silk screened circuit board, electronic, and mechanical components are all included.

Builders are required to supply commonly available earbuds, an onboard 9v battery, and some random wire for an antenna. Antenna requirements are just a simple wire antenna, thrown up into a tree or tied to a structure. The only tools required are an inexpensive 20 watt soldering iron, rosin core solder, small side cutters, needle nose pliers, small phillips, and straight screwdriver. Complete detailed assembly instructions and schematic can be viewed or downloaded from the files section of <a href="http://www.qrpkits.com/">http://www.qrpkits.com/</a>>.

This kit would be an excellent Elmer project for any ham radio programs targeted at increasing technical interaction with youth programs, schools, or attracting newcomers to the hobby. (Provided by Ken, WA4MNT)

**RF Noise in Plano.** For a couple years now I have been plagued with some sort of noise source that, at it's peak of about 3 KHz width, is an S-9 "buzzing" noise. The noise floor is also raised for about 30 KHz centered on this peak. It is unfortunate that the noise occurs right around the TEX net frequency of 3552. The "peak" wanders up and down in frequency between about 3548 and 3556. In prior years it was higher up so did not bother my operation, particularly my Transcontinental Corps schedules with the West Coast on 3552.

# **Events and Public Service Ops**

**12-13 June 2009 HAM-COM:** See the full page announcement on the next page for information on this year's HAMCOM. Meanwhile check out the website at <a href="http://www.hamcom.org/">http://www.hamcom.org/</a>.

#### 13-14 June 2009 ARRL June VHF QSO Party

The object 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. The event starts at 1800 UTC Saturday, ends 0300 UTC Monday (June 14-16, 2008). More info at <a href="http://www.arrl.org/contests/calendar.html">http://www.arrl.org/contests/calendar.html</a>.

**20 June 2009: Kids Day.** Watch for more information on this event.

**27-28 June 2009 ARRL Field Day:** The object 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 in doing so to learn to operate in abnormal situations in less than optimal conditions. A premium is placed on developing skills to meet the challenges of emergency preparedness as well as to acquaint the general public with the capabilities of Amateur Radio. Field Day is **always the fourth full weekend of June**, beginning at 1800 UTC Saturday and ending at 2100



This year it seems to favor 3552 for some reason and is very disruptive to net operations at both 7 and 10 PM. Another ham in Plano, Chuck, AA5J, who lives across town also has the same type of noise, and the picture that is included was taken by him from his SDR-1000 radio. I have eliminated the Water Meter remote transmitters from suspicion as they operate in the 900 MHz band. I suspect it may be noise from Verizon FIOS modems or perhaps the BPL that TXU is installing for remote meter reading. As far as I know, my meter is still "local", but there may be something in the neighborhood. Lastly, it might be a Plasma TV, but it seems to be on all hours of the day and night so is likely not that. I don't have a "portable" receiver to carry around outside to try to track it, since it is localized to this part of the 80 meter band. The 2<sup>nd</sup> harmonic is also elevated in amplitude, but that does not bother my operations. Anyone have any ideas? (73, Steve K6JT)

UTC Sunday. Field Day 2008 will be held June 28-29, 2008. More detailed info at <a href="http://www.arrl.org/">http://www.arrl.org/</a> cotests/rules/2009/fd. html.

#### \$\$\$\$\$ AMATEUR RADIO WANTED \$\$\$\$\$

Reply to: sale-5rv9x-1142957875@craigslist.org

Cash for your stuff ANY condition. Want all types, can repair, need whole ham shack.

ESPECIALLY looking for a Yaesu FT-920 but also need other radios too.

Email me, Dave, with what you have, best price and condition.

- Location: DFW
- It's NOT OK to contact this poster with services or other commercial interests

#### The Rockwell Collins Leadership Association presents:

# What happened to Amelia Earhart?



Amelia Earhart took off from Lae, New Guinea on Friday morning, July 2, 1937 in her flight to the Americanowned Howland Island on her way to Honolulu. There was a camera rolling during her take off – quite dramatic. Her last transmission, "We must be on you, but cannot see you. Gas is running low. We are circling, but cannot see island." was received by a surface vessel operating near Howland Island, then her Lockheed 5B Vega disappeared. The navigator, Fred Noonan, was also on board, and was lost.

Did they crash and drown? Were they captured by the Japanese, prior to World War II? Did they crash south of Howland Island, near Phoenix Island? The wreckage of their plane has never been located in the Pacific. So, were they lost, or are they still alive and living in some remote location? That question has

been investigated for years, and Rockwell Collins engineers are participating in the continuing search, now a high-tech effort by a team of skilled specialists.

#### Our Speaker:

Rod Blocksome is a Rockwell Collins systems engineer based in Cedar Rapids. He has over 40 years experience with the company.

Rod is also part of a team of engineers that have performed detailed technical analysis in an effort to locate Amelia Earhart's airplane in the deep ocean near Howland Island. He has donated his spare time over the past ten years to this project. He participated in two deep ocean search expeditions to the remote Pacific, each lasting two months. He tells a fascinating story of how science and technology is being applied to solve one of the most enduring

mysteries of the 20<sup>th</sup> century: Wha happened to Amelia Earhart?





Come and hear Rod tell about the adventure of the search. The one-hour program emphasizes the technology employed and the adventure of the search with video and color photographs. The presentation, a special event sponsored by the Rockwell Collins Leadership Association, is open to all employees.

The program will be presented in the Dallas Conference Room at 5 pm Thursday, May 21<sup>st</sup>. Seating is limited, so come early to be assured of a seat.



#### CQ-CQ-CQ

**Register online and SAVE \$2.00 thru May 30.** All online admission registrations will be entered in a drawing to win\* an ICOM ID-880H Digital/Analog VHF/UHF mobile transceiver! The winner will be notified by email prior to the event.

#### Latest QST for Ham-Com 2009 -

- The DX dinner is completely sold out! This will be the largest DX dinner in five years with 200 tickets sold. The Lone Star DX Association will host a series of programs for DX enthusiasts on Saturday, June 13 at the Plano Centre.
- 46 commercial vendors including Begali Keys of Cellatica, Italy will exhibit their products at the event!
- The indoor flea market is completely sold out! There is still space in the outdoor flea market and there will be plenty of space in the tailgate area. The tailgate market in the west parking lot will be hosted by the Plano and McKinney clubs.
- There will be over 80 hours of speakers, workshops and special interest group meetings at the event. The tentative block schedule for Friday, June 12 and Saturday, June 13 is available at http://www.hamcom.org/ via the "Programs" link. The complete schedule with program descriptions and speaker information will be available on May 30 in the Ham-Com Flyer.
- Ham-Com will give away one (1) Yaesu FT-857D each day at 5:00 p.m. All general admission ticket holders are eligible to win.\*
- An Alinco DJ-175T 5 Watt HT will be given away every hour. All general admission ticket holders are eligible to win.\*
- VE testing will be offered both days and the National Weather Service will provide basic and advanced SKYWARN training on Saturday, June 13.
- Ham-Com will once again host the Boy Scout "One-day Radio Merit Badge" program for up to 175 scouts. Please click on the "Scout Events" link at http://www.hamcom.org/ for complete information.
- The ARRL West Gulf Division meeting will be held on Saturday, June 13 at 11:00 a.m.

We believe that Ham-Com is "Amateur Radio at its best—Commercial exhibitors, flea markets, speakers, workshops, special interest groups, door prizes and much, much more..."

It is with great pleasure that we welcome special guests David Sumner, K1ZZ, the CEO of the ARRL, Gordon West, WB6NOA, noted author and educator and Bob Allphin, K4UEE, co-leader of the K5D Desecheo Island DXpedition.

Ham-Com appreciates the contribution of nearly 100 supporting clubs throughout Texas and the surrounding states. Bob Gormley, WA5YWC, a member of the North Texas Microwave Society (NTMS), served as this year's theme chairman.

We hope that you will attend Ham-Com 2009!

73 The Ham-Com, Inc. Board of Directors Bill Nelson, AB5QZ Fred Varian, WD5ERD Barry Goldblatt, WA5KXX

# The Amateur Radio Crossword Puzzler

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# 8. Nutcase

- 9. Chemical class
- 10. Kind of test
- 11. Irish prefix
- 12. Inverter label
- 13. "Of, by and for the radio amateur", e.g.
- 23. Allow to be known
- 25. Leif Ericson's rig?
- 26. Like the Mystery Tour
- 29. Drill wielder: Abbr.
- 30. Zero place
  - 32. Cochise's rig?
- 33. Eastern contest club
- 34. W6 airport
- 35. Brouhaha
- 37. IT9 erupter
- 39. W1 sect.
- 40. Batt. term.
- 41. ZP dir. from W2
- 43. Austrian prefix
- 44. Part of H.M.S.
- **49.** Deep space object
- 51. Professor's aide
- **52.** Big rig?
- 53. Moldovan prefix
- **54.** Not 70-across
- 56. Spandex brand
- 58. Madison Avenue worker
- 59. 9Q-land
- **60.** Benton Harbor lunchbox
- 62. Radiosport, for short
- 63. Math subj.
- 64. "Houston, had a problem"
- 68. "?"

#### This month's Puzzler Solution 66. Audio characteristics

- 67. Chicken
- **69.** PQ leaders
- **70.** "No ifs, ..."
- **71.** Epic name for
- SV folks **72.** Grav
- 73. What crank-up sections do
- 74. 25-down variety
- 75. Gate type

#### Down

- 1. Benton Harbor lunchbox
- 2. Pet prefix?
- 3. Possible Indy prefix
- 4. Toledo team member
- Say K
- 6. Grass shacks
- 7. Draft pick

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(Puzzler by Chris Codella, W2PA, reprint courtesy of ARRL.org)

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#### Hernando, KC5FDW Looking for 2007, 2008, 2009 QEX CDs or Magagines

There are two interesting projects one is a dual DDS and a Vector Analyzer

I hope you can assist me in tracking down somebody that may have them

# **55.** Zero

50. "Oh no!"

Across

1. New year's eve party

4. 32-down companion

15. Throat ornaments

17. Roman WARC band?

20. Top report, for short

21. Bigger than mins.

24. Superman player

31. Pilot's prediction

36. Venetian royal

45. Uruguay prefix

48. Elephant grp.

46. Unpopular spots

22. Coke flavor source

26. Alternate G-land prefix

38. 10m does it, with spots

42. This puzzle's subtheme

47. Final (amp) resting place?

27. 86, 87 and 89 source

**16.** 1960s kit maker

14. What a keeper may keep

10. Yagi, for one

18. Demodulate

19. Horn sound

28. VU place

33. jacket

57. ARES's cousin

52. Sporadic E band

- 61. With anger
- 63. Bygone airline
- 65. Average name

# 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

#### MEETING

Thursday 21 May 2009

1700 Fellowship 1730 Meeting

Rockwell Collins Building 462

Dallas Conference Room

# **NEXT SIGNALS DEADLINE:**

→→→ 01 June 2009 ←←←