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S I G N A L S

Rockwell Collins

Monthly Newsletter of the

Amateur Radio Club

Volume 29 Issue 07   Web Site **http://www.w5rok.us**   **April 2008**

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RCARC
Membership Meeting

Thursday
24 April 2008
1700 Fellowship
1730 Meeting
Rockwell Collins
Cafeteria

Subject: **"A General Overview of the APRS System," by Commander Bob Bruninga, WB4APR**

Local Club News

Meeting Notice All club members are strongly encouraged to attend this months meeting! This months program will be presented by Bob Bruninga, WB4APR, "The Father of APRS." See the President's Message and the Activities Corner for more information. Try to arrive at 1700 for the social time. There will be coffee and snacks available. The main meeting will start promptly at 1730.

Club Meeting Talk-In Each month, we have a Talk-In on the club repeater before the membership meeting on the night of the meeting. The Talk-In is from 1700 to 1730 hours, prior to the meeting.

RCARC Member in QST In case you missed it (as I did), one of our members, Stephanie, AC5NF is highlighted on page 21 of the March 2008 QST. Seems she gave a specially engraved key to her (then) fiancé Ken, KD5EVW.

Missing QST CDs The QST CDs that cover the years 1970-1974 have been missing from the Radio Room for several months. If someone has borrowed the set and forgotten to return them, please return them as soon as possible so others can enjoy them.

Upcoming Events and Public Service Ops

Admission Tickets & Flea Market Tables Now On Sale!

If you haven't visited the Ham-Com web site at www.hamcom.org, please do so to get the latest event information.

Admission tickets and flea market tables (indoor and outdoor) went on sale February 1. Online tickets can be purchased at a discount through May 30, 2008. Please note that tickets purchased online ARE NOT mailed. Tickets are valid for both days of the event and can be picked up at the admission desk. There are still some indoor flea market tables available. More space has been made available on the main exhibit hall floor and the total number of tables has been increased to 60.

The program list will be posted in March along with the Lone Star DX Association dinner information. The DX dinner can accommodate over 200 at the Holiday Inn Express, the Ham-Com 2008 HQ hotel. There are special rates being offered at the Holiday Inn Express, Best Western and the Ramada Inn Express. Please visit the

web site and click on the "Hotels" tab for complete information.

We're looking forward to seeing you at Ham-Com 2008!

73
Bill Nelson, AB5QZ
Fred Varian, WD5ERD
Barry Goldblatt, WA5KXX

14-16 June 2008: ARRL June VHF QSO Party The object of this event is to work as many amateur stations in as many different 2 degrees X 1 degree grid squares as possible using authorized frequencies above 50 MHz. Foreign stations work W/VE amateurs only. The event is the second full weekend of September. Begins 1800 UTC Saturday and ends 0300 UTC Monday (14-16 June 2008). More info at http://www.arrl.org/contests/calendar.html

28-29 June 2008: 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 UTC Sunday. **Field Day 2008 will be held June 28-29, 2008. More detailed info at** http://www.arrl.org/contests/rules/2008/fd.html

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<u>VE SESSIONS</u>

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

Irving tests are held 3rd Sat. of each month at 09:00. 5th 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 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.

President's Message

Greetings fellow RCARC members. The past month was a bit difficult with extended storm damage here at K3NT that resulted in replacing the main roof and ongoing cleanup from wind torn trees. This left little time for radio club activities. However, last month's RCARC presentation by Randy Dunning, KC5QHH, of Local RACES Activities, by Ian DiFranco, KE5FOM, sure came in handy as I followed the tracking of the storms and used items from my "Go Kit" to help our family and neighbors through some difficult periods. In case you missed this valuable presentation, I urge each member to go to our RCARC website at http://w5rok.us/ and study the Radio Amateur Civil Emergency Service in the members' only area. Within this document you will find additional interesting and educational hyperlinks.

Our condolences go out to member Steve Philips, K6JT, and his family on the passing of his mother.

- New Members – None to report. Please consider spreading the word to both active and retired interested Rockwell Collin folks that would enjoy and benefit in joining RCARC

- Updated W5ROK Telecommunication – Ross Terry, KE5SZJ, Robert Diepenbrock, KC4UAI

- Meeting Refreshments Setup Volunteer – Jim Skinner, WB0UNI

- 1000VA UPS install for W5ROK Repeater/Packet BBS – John Champa, K8OCL, Dennis Cobb,WA8ZBT

- Submitted Newsletter Articles- Steve Phillips, K6JT

- RCARC Marketing – Joe Wolf, N5UIC; Mike Hollingsworth, W5QH

- New Member Station Tour - No report this month

- Yet Another Great SIGNALS Newsletter – Jim Skinner, WB0UNI

- Treasurers Report - – Jim Skinner, WB0UNI

- Website Updates - Wayne Hughes, WA0TGH

- April Program - John Champa, K8OCL; Bob Bruninga, WB4APR

- May Program - John Champa, K8OCL; Jon McFadden, K5TIP, Ed Kettler
- RCARC Membership Applications & Database - Joe Wolf, N5UIC
- Secretary Report – Jim Sturges standing in for Jim Gaston, KD5GYD
- Station Trustee – Steve Phillips, K6JT
- Member Profile Responders – Gene Duprey, K1GD
- Inventory RCARC Library – Stephanie Keese, AC5NF
- CQ VHF Ham Radio Quarterly magazine donations - John Champa, K8OCL There are still some copies available for RCARC members in the W5ROK station.
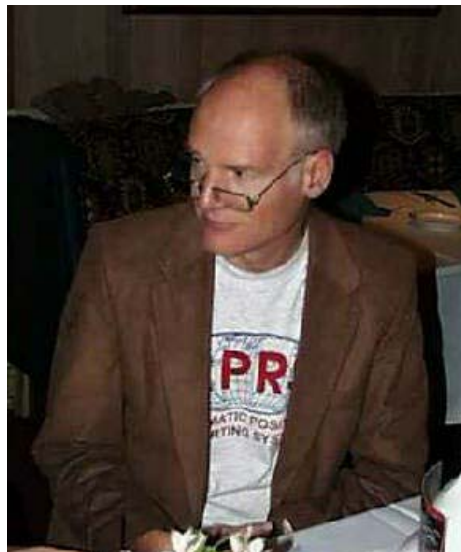
Be sure to read the well-written article "Using the W5ROK Packet Radio Node and BBS- Part 2" by RCARC Member Steve Phillips, K6JT, in this issue. This second technical installment of information about packet radio and using the club's packet node on 145.01 Mhz builds on part 1's basic foundation and explores using software for manual and automated operation. Active frequencies and activity in the DFW area are explored along with paths to neighboring states. Digipeaters and Nodes are explained along with details of how to access and use them for reliable communications.

RCARC APRIL MEETING
If you are interested in the area of GPS Receiver + Two-Way Digital Radio, you are encouraged to attend the next regular RCARC Monthly Meeting starting at 5 PM on Thursday April 24, 2008 (always the fourth Thursday of the month) in the company cafeteria. Robert Bruninga, WB4APR of the US Navel Academy in Annapolis, a internationally recognized individual, will be presenting, A GENERAL OVERVIEW of the APRS SYSTEM.
http://web.usna.navy.mil/~bruninga/aprs.html Per Bob, The **A**utomatic **P**acket **R**eporting **S**ystem was designed to support rapid, reliable exchange of information for local, tactical real-time information, events or nets. The concept, which dates back to the mid 1980's, is that all relevant information is transmitted immediately to everyone in the net and every station captures that information for consistent and

standard display to all participants. Information was refreshed redundantly but at a decaying rate so that old information was updated less frequently than new info. Since the primary objective is consistent exchange of information between everyone, APRS established standard formats not only for the transmission of POSITION, STATUS, MESSAGES, and QUERIES, it also establishes guidelines for display so that users of different systems will still see the same consistent information displayed in a consistent manner (independent of the particular display or maping system in use).

Bob Bruninga, WB4APR

APRS was developed by Bob Bruninga, WB4APR, for tracking and digital communications with mobile GPS equipped stations with two-way radio. In the 9 years since its introduction, it has grown to encompass just about every aspect of Amateur Radio.

Here are some comments from Gene, KI6LO; One thing to keep in mind about APRS (and alot of stuff we do in ham radio) is that it requires a bit of learning and exploration on your part to understand and utilize the mode(s) to their fullest. There isn't a magic pill for APRS, packet, PSK31, etc. but rather a vast repository of bits and pieces on the web and it is our job to hunt down the pieces and put the puzzle together. …

The TOP DOG on the "APRS Newbie's Must Visit Websites" is WA4APR Bob Bruninga's APRS website at the US Naval Academy. Bob is the "father" of the origi-

nal APRS concept (way back in the days of DOS) and has more information on his website than anyone can possibly digest in a single visit. Visit and bookmark it, because I know you'll want to go back to it time and time again. I do and I've been playing with APRS for several years.

So, here is your chance to see and hear Bob's excellent presentation on APRS at the April 24, 2008 RCARC meeting. Suggest you check out his website and bring your questions to the meeting for Bob to answer after his show.

All Rockwell Collins employees and guests are cordially invited to attend. RCARC membership is not required for this presentation and there is no admission fee. Per Rockwell Collins security policy, an active company employee or contractor must escort all guests.

Please note again this month **we will start meeting at 5PM**. Mr. Champa advised there will be refreshments. Jim Skinner will again be making his world famous coffee. Additional potluck refreshments are encouraged and welcomed. Please plan to arrive early to meet and greet RCARC members and guests. Our business meeting will start promptly at 5:30 PM with the USA pledge of allegiance. We will fire up the Tele-conference line around 5:15 PM for our remote members and guest speaker. Don't forget the 50-50 raffle. Tickets are $2 each, 3 for $5 and 7 for $10. The proceeds support club activities such as refreshments at our meetings. This month, we will be adding some additional small donated prizes to be claimed until they are all gone.

Our Activities chairman John, K8OCL along with RCARC RC flying Ace John, K5TIP, are looking skyward and working on our RCARC May 2008 meeting program. A hands on program on the many aspects of building and flying R*adio Controlled Aircraft*. Ed Kettler, of the Richardson Radio Control Club, and Friends will be presenting. Mark your calendars for May 22, 2008 and plan to attend this exciting presentation.

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

Secretary's Report

After a festive social half hour, Bob Kirby, K3NT, opened the March RCARC meeting at 1730 CDT (March 27th 2008) with the USA pledge of allegiance, in the RCI Cafeteria. Present at the meeting were:

John Champa   K8OCL
Randy Dunning   KC5QHH
Kenneth Hess   KE5SZO
Kenny Keese   KD5EVW
Stephanie Keese   AC5NF
Bob Kirby   K3NT
John McFadden   K5TIP
Jim Pellegrino   KE5SAR
Steve Phillips   K6JT
Chuck Samuel   K7NWM
James Skinner   WB0UNI
Jim Sturges   KC5QGK
Ross Terry   KE5SZJ
Charles Williams   WD5IRX
Joe Wolf   N5UIC

The following business was conducted:

1. Officer Reports
   a. *President's Report:* Bob Kirby, K3NT, summarized the meetings agenda.
   b. *Vice-President's Report*: Dennis Cobb, WA8ZBT, was not able to attend so Bob reviewed the status of the UPS installation, and a new 1.2 GHz repeater system.
   c. *Secretary's Report*: Jim Gaston, KD5GYD was unable to attend. Bob stated that the February meeting minutes were recorded in the March SIGNALS. There were no additions or corrections.
   d. *Treasurers Report*: Jim Skinner, WB0UNI, summarized the treasurer's report. The treasurer's report was accepted. The club is still awaiting this year's support contribution.
   e. *Station Trustee's Report:* Steve Phillips, K6JT, reported the club station, repeater and packet BBS are operational with no known issues at this time.
   f. *Activities Chairman Report:* John Champa, K8OCL, reviewed next month's programs. If you are interested in the area of GPS Receiver + Two-Way Digital Radio, you are encouraged to attend the next regu-

lar RCARC Monthly Meeting starting at 5 PM on Thursday April 24, 2008 (always the fourth Thursday of the month) in the company cafeteria. Robert Bruninga, WB4APR of the US Navel Academy in Annapolis, a internationally recognized individual, will be presenting, A GENERAL OVERVIEW of the APRS SYSTEM. Members were also reminded that member support is needed for RCARC 2008 Field Day in June.

2. Old Business
   a. Bob, K3NT, reminded the members that last months very informative presentation, "Dxing From a City Lot" presented by Dean Straw, N6BV, Senior Assistant Technical Editor, ARRL is available for review by RCARC members on our W5ROK website in the "members only", presentations area. The club has offered to poll members antenna questions / comments and send them along to Dean.
   b. Two excellent member articles appeared in March SIGNALS. Be sure to read the well-written article "Using the W5ROK Packet Radio Node and BBS- Part 1" by RCARC Member Steve Phillips, K6JT. Not only will you learn the basis of this digital mode but also the important role your clubs packet BBS plays in the ARRL NTX national traffic system. Steve has two follow-on articles in the works.
   c. The second well-written article "Logbook of The World" is by RCARC Member Dave Jaksa, W0VX. Dave presents a great economic case for using LOTW to save on rising QSL costs. Dave provides a good short tutorial of LOTW along with where and how to get it for your station. Having completed the process for K3NT, Bob said it is a relatively easy task. Bob is interested to know what logging program members are using, and he is contemplating Ham Radio Deluxe or Logger 32 for his computer logbook.

   d. If you enjoyed RCARC presentations or articles, please send your thanks to the presenters or authors.
   e. Members were reminded that per Rockwell Collins security policy only active employees or contractors can escort guests.

3. New Business
   a. *Fifty/Fifty Drawing:* The Fifty/Fifty drawing winner was RCARC member Jim Sturges, KC5QGK. Jim sure had a big smile.
   b. *RCARC Library:* A number of radio books, CD's and manuals are available for RCARC members in the clubroom. Member Stephanie Keese, KD5EVW, has offered to perform a inventory which we plan to place on the W5ROK website in the "members only" area.

Bob Kirby, K3NT, closed the business meeting at 1805.

Activities chairman John Champa, K8OCL, introduced the evenings program: Since Ian DiFranco, KE5FOM, had a last minute commitment, Randy Dunning, KC5QHH stepped in to present and discus the local communities RACES organization and supporting governmental activities, plus his recommendations for a "Go Kit". Everybody, all adults, but especially Radio Amateurs, should always maintain a "Go Kit". This is something you can grab and exist for at least 48 hours anywhere. Items such as water, food, RX, flashlight with extra batteries, change of underwear in water-proof bag, first-aid supplies, maps, etc. Members were reminded that the club has a signed Memorandum of Understanding (MOU) with Rockwell Collins in regards to providing liaison with local area ARES and RACES efforts, plus full support for the RC Facility Emergency Response Team (ERT). The presentation and demonstration of Randy's "Go Kits" generated a number of questions from our members and guests. Member Ross Terry, KE5SZJ, explained the importance of and his experience with "Go Kits" in last years major storm that affected our Rockwell Collins Melbourne facility. All those attending sure learned and exchanged a lot of very useful radio and support information that could be put to immediate use. This presentation will be placed on our

W5ROK website in the "members only" presentations area.

Activities Corner *By John Champa, K8OCL*, RCARC Activities Chairman

Volunteer for Field Day Now!
The club will operate from our normal comfortable station location but will be using an emergency generator placed outside the building. If you are interested in this exciting activity, you should contact Dennis Cobb, WA8ZBT, as soon as possible @ 972-705-1464.

Another entertaining and educational program for our April Club Meeting!
What does the acronym APRS mean? If you said "Automatic Position Reporting System", you are wrong! The April 2008 Club Program will be an exciting presentation by "The Father of APRS," Commander Bob Bruninga, WB4APR. Bob is on the faculty of the Annapolis Navel Academy and his presentation is one you will not want to miss: *A General Overview of the APRS System.* Refreshments will be available thanks to the efforts of Jim Skinner, WB0UNI. Also, starting with this meeting the 50/50 Drawing will be enhanced with additional prizes for runner-up drawings!

What is ahead for the May Meeting?
UAVs! Unmanned Aerial Vehicle. You may have read the recent news release from Rockwell Collins, Inc. regarding an addition to the company:

"CEDAR RAPIDS, Iowa (April 07, 2008)-Rockwell Collins, Inc. (NYSE: COL) has completed its acquisition of Athena Technologies, Inc., a company that develops and provides flight control and navigation solutions primarily to the Unmanned Aerial Vehicle (UAV) market segment."

John McFadden, K5TIP, helped arrange this fine presentation and he sent us the following description: In Amateur Radio we call this technology area R/C (Remote Control). Come to the May meeting to see how it is done… wirelessly.

Ed Kettler, of the Richardson Radio Control Club, and Friends are presenting A *HANDS-ON PROGRAM* on the many aspects of building and flying radio controlled aircraft. He will discuss the R/C technology and its many applications: Sport Flying, Combat, Electric, Helicopter, and Pattern (to name a few). You will see foam construction methods, which reduce the building time—and increase the ruggedness—of his combat aircraft. Pending the availability of evening light, FLIGHT DEMONSTRATIONS ARE PLANNED. We hope that you will make plans to enjoy this fun meeting.

Come to the Undiscovered Country…*a place where a lot of the future is going to be invented**

Mark your calendar now. Take a lunch break with a team of dedicated individuals. We will tell you how to access a world of fun, excitement, intellectual / cultural / technical growth, and exploration. This is all open to you as a United States government licensed radio operator. We are so excited about bringing you this information; we will even provide lunch!

Consider joining us on Tuesday May 20 at 11:30 AM in the Dallas Conference Room (M201) in Richardson Building 462. Hear and see for yourself an exciting introduction to the unity and goodwill of Amateur Radio. This avocation spawned Rockwell Collins. Yes, Art Collins was a dedicated Radio Amateur! It was Art's curiosity and determination as a "Ham" that started the famous Collins Radio Company.

Learn of the many exciting things that licensed Radio Amateurs do from technical innovations, community service, international goodwill, space communications, amateur television, etc. Radio Amateurs also directly support the Rockwell Collins Facility Emergency Response Team! We will have demonstrations of a few of the hundreds of areas within Amateur Radio.

There will also be an opportunity to sign up for the excellent Rockwell Collins Amateur Radio Club (RCARC) sponsored class that will teach you to take the Federal Communications Commission Amateur Radio License test. Except for the study guide, this course has no additional cost to you and Morse code is NOT A REQUIREMENT. However, the FCC license is required to communicate as a Radio Amateur or "Ham".

Two of these recent classes graduated over 20 fellow employees who have achieved their Federal license. The classes are very popular and fill up fast, so if you sign up for the class, we ask you to commit to attendance for the duration of the class. The classes run for two lunch hours per week for four weeks.

To make a reservation for this first meeting please e-mail Mike Hollingsworth at mahollin@rockwellcollins.com Looking forward to seeing you there!

MODERATOR: Mike Hollingsworth, RCARC Registrar

DEMONSTRATIONS: Bob Kirby, RCARC President

LEAD INSTRUCTOR: John Champa, RCARC Activities Chairman

Please note that Amateur Radio is neither "CB" nor a replacement for your cell phone. Radio Amateurs are FCC licensed radio experimenters, learners and / or public service individuals. If that sounds interesting to you, then please join us on Tuesday May 20, 2008 @ 11:30AM. We think you will have a good learning experience.

In addition, there is more…!

If you are interested in the area of GPS Receiver + Two-Way Digital Radio, you are encouraged to attend the next regular RCARC Monthly Meeting starting at 5 PM on Thursday (always the fourth Thursday of the month) in the company cafeteria. Robert Bruninga of the US Navel Academy in Annapolis, a internationally recognized individual, will be speaking on this interesting subject. All Rockwell Collins employees are cordially invited to attend. RCARC membership is not required for this presentation and there is no admission fee. Refreshments will be available.

These events are sponsored by the Rockwell Collins Amateur Radio Club (RCARC), Rockwell Collins, Inc., Richardson, TX 75082 (http://w5rok.us/) with FCC radio call sign of W5ROK.

* Dr. Eric Haseltine, AB3DI, as paraphrased in a recent interview published in one of the most popular Amateur Radio publications: CQ Magazine http://www.cq-amateur-radio.com/.

ARRL Membership Benefits

There are "fringe" benefits for RCARC when our members join or renew through the following process.

Renewing By Check—After filling out the form, return it to RCARC with your check. Note the definition of New or Renewing Member at the top of the form. If you have previously been a member of ARRL but have let that membership lapse for 2 or more years then you are considered a new member and the club would get a $15 commission. If you are renewing a current membership or one lapsed for less than 2 years, you are considered a renewing membership and would get a $2 commission. Do not deduct the $15 or $2 commission—make the check out to RCARC for the full renewal amount.

Renewing By Credit Card—If you wish to CHARGE the renewal to a credit card note the special instructions (Box on right side of form) which indicate that you would then pay the $15 or $2 directly to RCARC. Your credit card would be charged for the full amount minus the appropriate commission. In this instance the check should be made out to the RCARC for the appropriate commission amount.

In both cases, return the application to RCARC regardless of payment method in order for RCARC to get credit. *The application is now available on the RCARC website!* Mail to the following address:

RC Amateur Radio Club
Attn: Treasurer
MS 461-290
PO Box 833807
Richardson TX 75083-3807

RCARC Member Profile

This month we are pleased to profile member Frank Krizan, KR1ZAN. Frank is retired and often operates amateur radio from the comfort of his motor home while traveling about the U.S.A.

Frank, How did you get started in Amateur Radio?

I've had a fascination with radio for as long as I can remember. I was enthralled with DX listening on my folk's old tube radio as a youngster. I used to stay up late at night to listen to DX on broadcast radio. My "heroes" were Carl and Jerry in Popular Electronics magazine. I worked at my dad's service station for almost a year to get enough money to buy a National NC-60 shortwave receiver. I experimented with "spark transmitters" using old Model T spark coils and lots of wire in the air. A friend and I were able to hear each other across town -- and so could hundreds of others on their radios and TV sets.

My best friend and I were fascinated with Ham radio -- we learned about it from Popular Electronics and Boy's Life magazines. After visiting a family friend, who was a Ham, we decided that we had to get our license. After almost a year of off and on studying, we took our Novice exams, with the help of a local Elmer. About a month later, I got my first call -- WN5ABU. I was so excited when I received the ticket in the mail that I could barely open the envelope.

During the year we were studying for our exam, I built an Eico 720 CW transmitter. The day I got my ticket, I called my best friend and found out he had received his also. We got on the air and, thus, made our first real contact. When we finished, my heart almost sunk ... someone was calling me ... what was I to do? Well, I managed to get through my second QSO and with each contact got more confident.

What are some of the most interesting memories or QSO's

I've had many interesting QSOs. I could, as could many others, write a book about interesting, unusual and special QSOs; but, I will limit it to two:

I went to work for Collins Radio Company in Richardson in 1968. I drove a 66 Malibu and lived in Farmers Branch. One afternoon, as I prepared to leave the parking lot to the south of Building 401, I turned on my HW-12 80 meter mobile rig. Tuning around, I heard a station about to sign off with KC4USA -- I knew from the old prefix and special calls that this was a station in Antarctica. When the other station signed off, I quickly called the KC4 station and got him on the first call. When he learned I was mobile, that's all it took. I talked with him continuously for the 20 minutes or so I was on the road. Perfect tim-ing, just as I pulled into the apartment's parking lot, band conditions began to change and it was time to sign. Wow ... I had never thought I would get such a path on 80 meters.

My second memorable QSO was also a mobile contact. This was years later. I believe it was 2000. I was working for SBC in Irving and was on my way to a meeting near the old Collins Radio facility in Richardson. I knew the Space Shuttle was up, so out of curiosity I had one channel of my 2m rig in the car tuned to the Shuttle downlink. Suddenly, a voice crackled from the speaker just as I pulled over the bridge from Central Expressway onto Collins Boulevard. The Shuttle operator was saying 73 to a Ham in New Mexico and said "QRZ'd". I gave a call and made the contact. We exchanged names and calls and I mentioned that I was driving by the old Collins Radio plant in Richardson. She knew about Collins. Wow ... how exciting.

Have you been a builder? If so, what were your projects?

Mostly Heathkits. My first transmitter was an Eico 720 CW Transmitter kit. This was followed by an Eico 730 AM Modulator. Next, I built a Heathkit Two'er (the Benton Harbor Lunchbox). Just prior to this, I built a homebrew super-regen 2m receiver -- big and bulky. Then, I built a Heath HW-12 80m SSB Mobile Transceiver. While in the Navy, I built a Heath SB-102 SSB 80-10m Transceiver which was my primary transceiver until I moved to a Kenwood 850 when the old Collins Radio Club was doing bulk purchases in the late 80s.

I've built a series of QRP rigs, either from kits or from scratch. Lots of antenna projects.

Do you belong to the ARRL?
Yes ... Life Member

Read any other Ham magazines, like CQ?
I read World Radio and the AMSAT Journal.

What are your current Ham Radio interests?

Just about Ham Radio in general. I'm re-working my HF/VHF/UHF equipment in our motorhome. I enjoy APRS, HF nets, working DX, contesting (on a limited scale), working with propagation software and HF ragchewing. Right now, a friend of mine in Canada and I are constructing the 2m and 70cm Double Crossed Dipoles, described in a recent QST, so we can work each other via the LEOs. We're designing the antenna to be easily broken down and transported so we can carry more easily in our motorhomes.

What are your other hobbies?
Scouting, motor-homing and learning about the Mac.

Are you active on any of the HF or VHF bands, Nets?
Yes ... I have equipment and antennas for 80-10, 2m and 70cm. About the only Net I'm regular on is the FMCA ARC Net Mon-Fri on 14.263MHz at 1900Z.

73,
Frank, KR1ZAN

If you enjoyed reading this Member Profile, please consider sending in your answers to these questions. Sure others would enjoy learning a little about you. Bob, K3NT, **k3nt@arrl.net**

Items From our Sister Club in Cedar Rapids—W0CXX

CARC Meeting 15 April, 2008
QRO-QRM - History and challenges of building a major international shortwave Broadcast site. Guy West - Technical Services Director of Far East Broadcasting Company and Rockwell Collins contract employee will share his experiences in Bocaue, Philippines from 1999 - 2003. During that time Guy worked on many aspects of design and construction of an international broadcast facility employing 4 Steerable HRS 4x4x.5 TCI billboard antennas, 4 100KW Continental transmitters, plenty of transmission line, switching, automation, etc. Guy will present an overview of the challenges and the results from coverage prediction to commissioning of this site. He hopes that the site he built never squashes your puny little signals during DX contests on 40m :)

ALL ROCKWELL COLLINS AMATEUR RADIO CLUBS SPECIAL EVENTS: *All RCARC Members Please Read & Respond*
Your Collins ARC leaders (From ALL our Company Clubs, both domestic & International) are in the process of planning two separate Special Events for the amateur radio community. Things are pretty tentative as yet, but here is what we are thinking: Rockwell Collins Worldwide Special Event dates – Tentative

Week of July 11th - July 20th would be the special event for the 50th anniversary of the S-Line. We would have a time to operate and then finish the job by sending QSL cards.

Week or Weekends of Sept 27th – 75th Anniversary of Collins Radio

RCARC MEMBERS: Do you want to participate?

If YES, then please provide me your contact email and address back to me: Bob Kirby, K3NT, k3nt@arrl.net stating your intended participation.

If we can get enough participation then we are anticipating having all Clubs use the same logging program, WRITELOG. We will have to decide whether to combine logs etc, but at least we will be on a common SW program!

We plan to design/print a special QSL card for the special events....possibly a certificate.

The special events will be published in QST.

Thanks for your attention to this in advance. PLEASE: Respond ASAP

Impromptu Tailgate and Open-Trunk Pre-Dayton Swapfest!
Where: Collins Main Plant- 137 Parking Lot (East of the cement island, straight out from the 137-1 Guard Entrance)

When: Sat, May 10th at 8:00am 'til 10:30am

Who: Any Radio Amateur (CARC, CVARC, EIDXA, etc.)

Admission Cost: None!

Prizes: None!

Talk-in: None!

Refreshments: None!

Facilities: None!

Commercial Vendors: None!

Rain Date: None! This is it!

This is a time to just pull up your pick-up or car and open the trunk to buy/sell/trade the things you'd rather not haul to Dayton. If you don't have anything, come over anyway and have a few eyeball QSO's with some old friends. You can always get a cup of coffee afterwards.

FOR SALE:
Icom 1C-Z1A dual 2M/440 *Handheld* Transceiver - $100

Yaesu FT-8000R dual band *mobile* 2 meters and 440 MHz. Power output on 2 meters is 50, 10 or 5 watts. Output on 440 MHz is 35, 10 or 5 watts. And this radio provides *very* extended receive capability: 110-550 and 750-1300 MHz (less cellular). The Omni-Glow™ dual band display can be viewed under varied lighting conditions. You get 55 memories per band. The rear panel features a 1200/9600 baud Packet jack. There is one DTMF auto-dialer memory per band. This radio requires 13.8 VDC at 11.5 amps. 5.6 x 1.6 x 6.1 inches. $135 Contact Dan Mussel at 319-295-0700

Using the W5ROK Packet System Part 2

By Steve Phillips, K6JT, W5ROK Trustee

This is the second installment of information about packet radio and using the club's packet node on 145.01. The first part of this series dealt with how to get on packet and how to use the W5ROK-1 bulletin board system. This part assumes you are familiar with the information in part 1. A third installment is planned to discuss how to use the Winlink 2000 system, which is not connected to the W5ROK system, but which will be of interest to many of you who manage to set up a packet station.

A couple items of interest are first in order. Part 1 concentrated on hardware packet terminal node controllers and their use. It is also possible to use a Windows computer with soundcard to get on packet directly. One software package is called "AGW Packet Engine", and was created by SV2AGW. To get more information on this as well as other packet radio related software, follow some of the links resulting from a Google search for AGW Packet Engine. Note, however, that this sort of setup will only allow you to do manual keyboard type entries. It will not work with automated software such as is used with the Winlink 2000 system.

Packet radio can be used to chit-chat "in real time" with another station, much like a Radioteletype (RTTY) link could be used. Instead of connecting to a computer-controlled (or smart TNC) station, just enter the connect (c) command followed by the callsign of the station you wish to contact. However, very few of us leave our packet stations on all the time any more. I used to do that, but burnt up a radio so now I only turn it on when I am going to access the BBS or Winlink stations. In listening around, I have heard very few ham-to-ham contacts going on, at least on 145.01, 145.03, 145.05, 145.07, and 145.09. In some areas, 145.36 is also used for packet radio operation.

Regarding frequencies, here in the Dallas area, 145.01 is used primarily for nodes and BBS stations such as W5ROK. 145.03 and 145.05 used to have automated networking systems on them but they are pretty much silent now. 145.07 is used by the Dallas County area RACES for Winlink access. There are also several other stations using 145.07 for chit-chat. 145.09 is used by the Collin County ARES for Winlink operations. There are many stations on there, all tied to the Collin County EC's station (N5BYL-10). It is a good system and is the one I use myself. I'll describe more about that in part 3 of this series.

Many of us use the packet system like we do Internet E-Mail. Winlink is almost the same as using the Internet, and we'll get to that in part 3. But what if a station you want to communicate with (i.e., leave a message for) is not reachable directly and does not have Winlink?

The answer is to use the W5ROK BBS or the ROK "node" or "digipeater" functions to extend your "reach". Our packet station antenna is currently pretty low and not of high quality. It is sufficient for most uses, but if more club members get interested in using the packet mode, then a better (and higher) antenna is the first thing we should add. Right now, we can reliably contact the

Denton ARC node and BBS, which I use from time to time. We used to be able to reliably contact the Tyler, Texas node (TYR or K5TYR), but that has not been working well lately, probably due to conditions and our deteriorating antenna. From the TYR node, we have access into Arkansas and Louisiana, so it is a nice path to have.

You may be asking "what is a *digipeater* and what is a *node*?" They are similar in function but work a bit differently. Early packet radio TNCs only had the capability to repeat (termed "digipeating") what they heard, when so commanded, in order to forward a user's packets onward to a distant station that is not reachable directly. Multiple "hops" may be performed using digipeaters. Of course, you have to know what digipeaters are available along the path. Furthermore, digipeating tends to use lots of "bandwidth" on a busy channel, since every packet sent is repeated again all along the chain, and acknowledgments from the distant station are similarly repeated back up the chain to your TNC. This ties up the channel, making it unavailable for very many other users. Furthermore, with all the QRM, your packets are likely to get "busted" somewhere along the way, making it necessary to resend them, sometimes over and over again (recall this is an "error free" mode with acknowledgments required for everything and automatic re-send).

Enter the "node" function. Like digipeating, it allows you to get your packets to a distant station. However, it saves channel resources because any "lost" or erroneously received packets are only re-sent to the closest node, not all the way back to your station.

An example may help. Let's say I want to talk with Si, K5JRN, a friend of mine who lives in Denton. He is also active on the Texas CW traffic net, but with the low sunspot cycle, we sometimes "skip over" each other on 80 meters at night. So we set up a schedule to meet on packet to exchange traffic (messages). Both of us have poor antennas (mine is in the attic), so there is no way to directly contact each other. However, by using W5ROK and W5NGU (the Denton ARC packet node), we can easily make station-to-station contact.

On my end, to use digipeating, I would enter:

C K5JRN v rok denton (connect with K5JRN via ROK and DENTON) in order to use W5ROK and W5NGU as digipeaters (pseudonyms are allowed for node names as long as the station is identified). The connect would go to ROK, which would send it to DENTON (W5NGU), which would then send it to K5JRN. His TNC would respond with an acknowledgment, which would go to W5NGU, which would send it to W5ROK, which would send it to me. If anything went wrong, the entire process would need to be repeated. Once connected, all of our packets traverse the digipeater chain as noted. Pretty neat.

Now, let's use the two stations as "nodes" rather than digipeaters. Instead of directly connecting with K5JRN, I first connect with the ROK node: C ROK

It responds with a normal connection message. I then enter C DENTON

The W5NGU node then responds to ROK and ROK tells me it is connected.

I then enter C K5JRN. The DENTON node calls Si and makes the connection for me. It then tells me it is connected to K5JRN, so I start sending to him in the normal manner. Each packet I send goes to ROK, which acknowledges it to me. ROK then sends the packet to DENTON, which acknowledges it back only to ROK. Finally, DENTON sends it to K5JRN, which acknowledges it back only to DENTON.

So how did that save any channel resources? Well, it didn't, assuming the channel was clear and all packets made it through. Let's see…

Digipeater: Connect goes to ROK, ROK repeats to DENTON, DENTON repeats to K5JRN. K5JRN acknowledgment goes to DENTON, DENTON repeats it to ROK, and ROK repeats it to me. That's 6 transmissions on the channel.

Node: Connect goes to ROK, ROK acknowledges to me; Connect goes to DENTON, DENTON Acknowledges to ROK, DENTON goes to K5JRN, K5JRN acknowledges to DENTON. That's also 6 transmissions, no advantage there.

Right, but what if the acknowledgment from K5JRN did not make it back? It would take another 6 transmissions to re-try the connect using digipeaters, but it only takes 2 transmissions (another C from DENTON to K5JRN and another acknowledgment back to DENTON) to retry using nodes. The retry operation (which happens a lot on a crowded channel) is what saves channel resources. I always use the node system rather than digipeating wherever it is available, even for only a single hop. Note also, that because the repeat occurs at a far distant node, which is not otherwise accessible directly, it does not interfere with operations on the closer stations.

How do you find out what nodes are available? That's the purpose of the "Node" (or "N") command. Here's a sample dialog, captured from on-air operation:

```
c rok
cmd:*** CONNECTED to ROK
###CONNECTED TO NODE ROK(W5ROK) CHANNEL A
ENTER COMMAND: B,C,J,N, or Help ?
n
NEBO        (K5PXP-8)   10/21/2007 13:35:32
DECATR*     (WD5IWW)    11/02/2007 22:56:07
AA5DD-7*    (AA5DD)     11/07/2007 16:46:57
N5VUC-7     (N5VUC)     12/13/2007 04:20:14
ADA         (WB5NBA-1)  01/27/2008 16:38:52
DQN         (N5THR-3)   01/28/2008 03:52:07
MENA        (N5THR-4)   01/28/2008 04:16:13
MALVRN      (WD5JPG-4)  01/28/2008 04:28:58
GNZ         (WB5MCT-2)  01/28/2008 05:40:19
SWA         (KB5RYP-4)  01/28/2008 07:44:00
CAMDEN      (KK5NE-4)   01/28/2008 07:53:51
SPA         (WB5SPA-4)  01/28/2008 10:15:20
DUA         (AB5CC-2)   01/28/2008 11:02:08
SAR         (KB5ROZ-4)  01/28/2008 13:01:42
TYR         (K5TYR)     02/11/2008 12:27:55
Network     (DISABL)    02/25/2008 11:56:09
DENTON      (W5NGU-4)   03/05/2008 01:27:51
ENTER COMMAND: B,C,J,N, or Help ?
```

Here, we did a Node command to determine what nodes might be in range of W5ROK. As you can see, there are quite a few that have been heard in the past few months. Note particularly the TYR node – the last time it was heard was on the 11th of Febru-

ary. Note also the long list of nodes last heard on the 28th of January. Evidently conditions were very good that day on 144 MHz, because a lot of those nodes are in Arkansas and Louisiana (you can look up the callsigns associated with the nodes). I tried to connect with TYR, something I used to be able to do regularly, but it was a no-go. I suspected that would be the case, given it had not been heard since early February. In general, try nodes that have been recently heard for best results. DENTON is right there, as may be seen.

You may have noticed that the commands available at a node are somewhat like those available on a BBS (but with different functions, of course). Here is what a "help" command gives on ROK:

```
h
ABORT           STOP A CONNECTION IN PROGRESS
B(ye)           NODE WILL DISCONNECT
C(onnect) call  CONNECT TO callsign
C call S(tay)   STAY CONNECTED TO NODE WHEN END DIS-
CONNECTS
J(heard)        CALLSIGNS WITH DAYSTAMP
J S(hort)       HEARD CALLSIGNS ONLY
J L(ong)        CALLSIGNS WITH DAYSTAMP AND VIAS
N(odes)         HEARD NODE CALLSIGNS WITH DAYSTAMP
N S(hort)       NODE CALLSIGNS ONLY
N L(ong)        NODE CALLSIGNS WITH DAYSTAMP AND VIAS
ENTER COMMAND: B,C,J,N, or Help ?
```

You can experiment with the various commands to see how they work, once you are connected to the ROK node.

Here is what the nodes list looks like from the W5NGU node:

```
cmd:c rok
cmd:*** CONNECTED to ROK
###CONNECTED TO NODE ROK(W5ROK) CHANNEL A
ENTER COMMAND: B,C,J,N, or Help ?
c denton
###LINK MADE
###CONNECTED TO NODE DENTON(W5NGU-4) CHANNEL A
ENTER COMMAND: B,C,J,N,X, or Help ?
n
MENA/V       (N5THR-4)   01/28/08 08:06:57
DQN/V        (N5THR-3)   01/28/08 08:52:52
CAMDEN/V     (KK5NE-4)   01/28/08 09:14:33
SWA/V        (KB5RYP-4)  01/28/08 09:34:43
NOTREE/V     (KK5MV-7)   01/28/08 10:33:59
TYR/V        (K5TYR)     02/09/08 08:39:13
CROSBY/V     (KC5MVZ-8)  02/11/08 13:28:49
ADA/V        (WB5NBA-1)  02/13/08 10:39:37
DUA/V        (AB5CC-2)   02/21/08 16:51:53
NEBO/V       (K5PXP-8)   02/25/08 05:02:13
FSM/V        (W5ANR-8)   02/25/08 05:17:11
SPA/V        (WB5SPA-4)  02/25/08 08:10:49
Network/V    (DISABL)    02/25/08 08:47:30
GNZ/V        (WB5MCT-2)  02/25/08 09:59:39
VARC/V       (W5DSC-10)  02/25/08 11:08:56
RENDON/V*    (KC5TIL)    03/04/08 20:04:25
N5VUC-7/V    (N5VUC)     03/04/08 20:13:54
ROK/V        (W5ROK)     03/04/08 22:25:34
ENTER COMMAND: B,C,J,N,X, or Help ?
```

Compare this to the list of nodes at ROK, and you will see there are some that are the same, but there are also others that are different because of the geographical separation of the two nodes. The "/V" in the Denton list indicates that they have a dual-port TNC, one port is on VHF and the other port is (assumedly) on HF or another VHF/UHF frequency. *(Cont. on page 11)*

The 2008 BCRO Superfest
"The warm-up for Dayton"

Saturday, April 26th, 2008 8:00 AM to 2:30 PM
The Jones Center for Families
922 East Emma St. Springdale, Arkansas 72764
N 36° 11.174 W -94° 07.073
Web: http://www.jonesnet.org/
Talk-in: 145.290 - offset with PL 110.9
Admission: $3:00 per person in advance
$5:00 per person at the door
Tables: $5:00 each if reserved in advance
$6:00 if purchased at the door
New Vendor Special: $5:00 Unlimited amount of tables.
To reserve a table: download and mail in this form.
Set-up times: Friday April 25th from 6:00 PM until 9:30 PM and Saturday April 26th from 7:30 – 8:00 AM.
Plenty of Free Parking
Food and Drinks will be available

Vendors Attending:
Clear Signal Products
D&L Antenna Supply
K&E Electronics
All-Star Name Tags
Ozark Thread Works
Razorback Radio

Great Bargains at the Flea Market

Forums:
ARES/RACES - Karl Bullock WA5TMC
ARRL Forum - David Norris K5UZ
ARRL in Washington DC - Amy Bullock N5TBB
Weather - Steve Gibbs
VE Testing – Starts at 1:00 PM. Walk-ins are welcome.
Hourly door prizes and a terrific grand prize
(do not have to be present to win grand prize)

Plan now for the ARRL 2009 Arkansas State Convention to be held here.
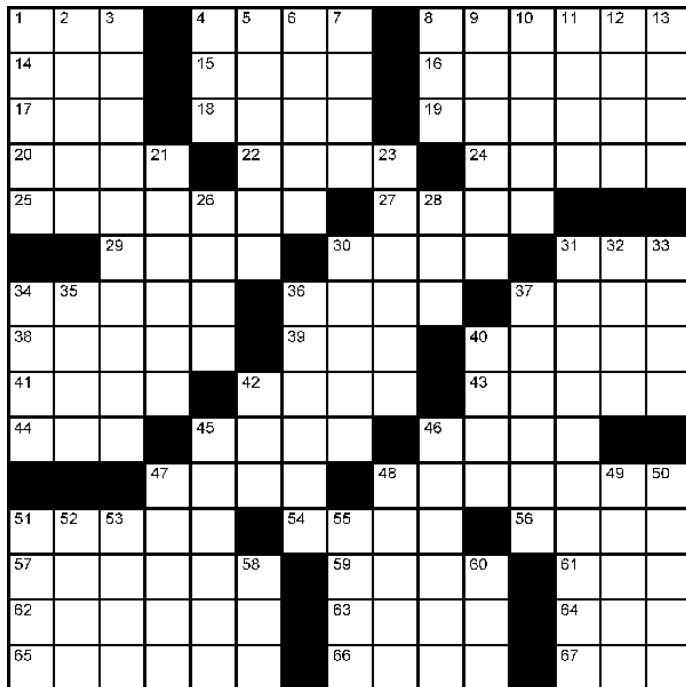
For More Info Contact:

Jay Harrison, KCØCNB

Phone: (479) 631-7727

Cell: (479) 644-6646

E-mail: Texgun19@cox.net

The Amateur Radio Crossword Puzzler

Across

11. Cluster cmd
4. Tribander part
8. *10MHz, with 30-down
14. Grammy category
15. Sushi fish (some may generate RF noise)
16. Especially comfortable place for a DXpedition, say
17. Words of understanding
18. Radiation from a "cloud burner"
19. EP city
20. Early radio construction material
22. Part of IARU (abbr.)
24. 5Z
25. Contender, e.g., for ARRL director
27. Copies
29. 160m luminary Perry
30. Polar explorer, early radio user
31. Early radio noise maker
34. WAS item
36. Charge opposite?
37. Spectrum Defense ____
38. With 40-across, a hint to solving the clues indicated with a *
39. Paddle
40. See 38-across
41. Sky hooks, briefly
42. Some HV paths
43. Young's accounting partner
44. Relative of cap. and ind.
45. Bumpkin
46. Wire, from 44-across, say
47. Simple
48. Conclusion
51. Monastery head
54. RF effect
56. Fly high
57. Flying high
59. Used to stabilize a crystal
61. Owed
62. VHF antenna measurers?
63. 59-across product
64. Before, in verse
65. *7MHz, with 30-down
66. Some service hams
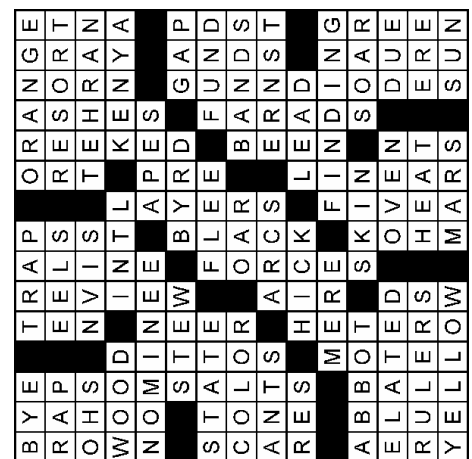**67.** Band condition influencer

Down

1. *21MHz, with 50-down
2. Internet cry?
3. What's needed after barefoot tower climbing?
4. Doubled, it's a "net"
5. "Recent Equipment"
6. 50's Collins
7. "Hey ... over here!"
8. Crumb
9. Stank
10. Blown resistor remnants
11. Norse goddess of fate
12. *3.5MHz, with 30-down
13. I-land island peak
21. Mimeographs
23. E, F and others
26. ___-do-well
28. Prefix with -selector
30. *
31. Microwave parts
32. Some gates
33. W6 summer time
34. Kind of tissue
35. Nearly always 9
36. Electromagnetic, and others
37. Coulombs per volt
40. "It's ___ real!"
42. Ether
45. Prefix with -geneous
46. Amplifier type
47. Place to stay at the Hamvention, possibly
48. Libya
49. C2
50. *See 1-down
51. Ethereal
52. *5.4MHz, with 30-down
53. Kind of joint
55. One V per mA
58. UA 73
60. Tfc. org.

Solution to this month's Puzzler

Using the W5ROK Packet System Part 2 *(Cont. from page 9)* Their "X" command also allows you to go cross-port to connect with stations or other nodes reachable via that port.

There is a lot more that could be written about using your TNC to monitor the channel, view the actual packet header information (great for finding problems), and monitoring packets even while you are connected. But that would fill another entire newsletter, so it will remain a possible future article once more club members are on packet and would like a little more tutorials.

The next installment will deal with the Winlink system, primarily from a user standpoint.
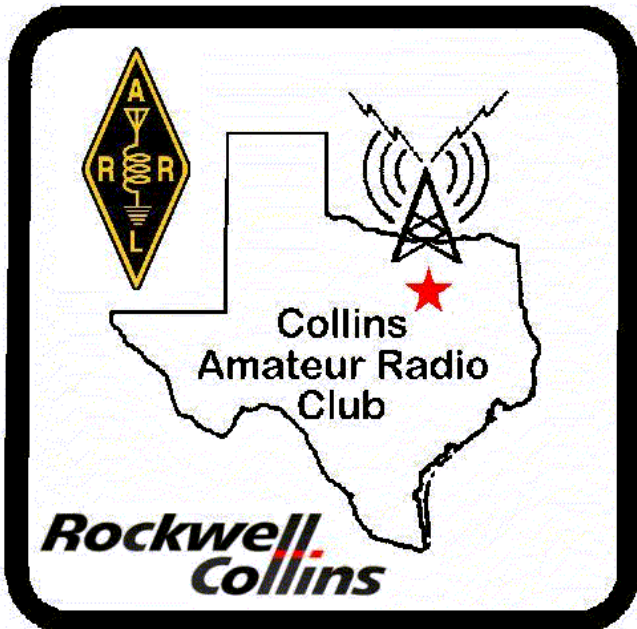
Rockwell-Collins

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 24 April 2008

1700 Fellowship
1730 Meeting

Rockwell Collins Cafeteria

NEXT SIGNALS DEADLINE:
12 May 2008