SIGNALS Rockvell Monthly Newsletter of the Collins Amateur Radio Club

Volume 30 Issue 5

Web Site http://www.w5rok.us

February 2009

RCARC Membership Meeting

Thursday, 26 February 2009 1700 Social 1730 Meeting **Rockwell Collins Building 462 Dallas Conference Room**

Subject: "ARBONET is coming", by Doug Loughmiller, W5BL, the leader of ARBONET

Local Club News

Meeting Notice Come to our next club meeting this Thursday to hear Doug Loughmiller, W5BL, the leader of AR-BONET. See his awesome photos taken from the camera onboard the balloon. This presentation will be both an exciting educational show and a recruiting effort. See you at the 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 is from 1645 to 1730 hours, prior to the meeting.

ARRL January VHF Sweepstakes W5ROK operated in the ARRL Jan VHF Sweepstakes. A total of 20 contacts were made in about 2 hours on 50, 144, 432 and 1296 Mhz. The report follows below.

Callsign W5ROK Operator(s) WA8ZBT Category-Operator SINGLE-OP Category-Station FIXED Category-Transmitter ONE Category-Power LOW

> Location North Texas - NTX Rockwell Collins ARC Name Address

3200 East Renner Road, Richardson TX 75083 USA

2009-02-18 0400.00 UTC Log Deadline 2009-01-20 0341.22 UTC Received at

Reported QSOs

Confirmation # 4060776.arrl-vhf-jan

Buy, Sell and Trade is Back... See page 7.

Thank You Ross Terry K5SRT The RCARC owes a debt of gratitude to Ross Terry K5SRT for stepping up to the task of coordinating the 75 Years of Collins Radio Special Event operation and for responding to all of the QSL cards received for the event. The event was a success in a large part due to Ross' efforts and those who made contact will enjoy the cards from this once-in-a-lifetime event. Other participants played a large part in the special event as well but they wouldn't have if not for Ross taking on the point-of-contact role. Speaking of 75th Anniversarv QSL Cards.....

Saint Bernard's 75th Anniversary QSL Card

by Sidney Ross Terry

Great news: we've completed the W5ROK QSL Card return reguests we've received to date on the 75th Anniversary of Collins Radio, Inc. and 50th Anniversary of the Collins S-Line that were in the In-Box through February 14th.

You'll now find a Great collection of QSL Cards in a new box next to the In-Box in the shack. Please let us know which ones you like and possibly sort them to the front of the related groups. Here are some of my picks from the 75th after processing over 100 QSL cards myself (they sure made processing more fun). Maybe its time you update your own QSL card? Don't miss these:

KE7JIP – Steve from Reno NV has a nice picture showing Stretch (180lbs) and Miss Bree (135lbs) his Saint Bernard's.

KH6IB - Randy in Honolulu HI has W5ROK on the front of a picture card showing also a big wave and surfer.

K7ACZ - Alan in Las Vegas NV. The card came in with personalized stamps showing his license plate tag number. Pretty cool setup!

KI6MQX – John in Montague CA must be a wood worker. His card had a nice Wood Planer on it.

NY0V - Tom in Cedar Rapids IA has a tower on his card that many of us wish we had at our place!

KB3QMT - Jeff from New Castle PA had a very nice winter picture of his barn and silo and QRZ showing a picture of his radio shack.

KD4QMY - George out of Macon GA sent a card that will make you smile as you see his dog Phoenix listening for a rare DX call.

I loved the many Collins Special cards, messages, and cartoon QSL cards as well.

K5SRT

KD5GYD

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W5ROK 461-290

VE SESSIONS

Dallas tests are held 4^{th} 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.

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President's Message

If you are interested, you will do what is convenient. If you are committed, you will do what ever it takes.

My continued thanks to the RCARC members who have supported and shared their knowledge and talents for the benefit and enjoyment of our members. We are experiencing increased use of the club station, making use of our test equipment and extra radio gear and sharing practical hints and tutorials to help our new operators.

Steve, K6JT, has completed his CW testing of RCARC's Elecraft K3 HF transceiver so be sure to read his interesting report in this issue. Bob, KC4UAI, is next up and will be testing the digital capabilities of the K3. KC4UAI's testing will be followed by Chuck, K7NWM, and Jim, KD5GYD.

I had the pleasure of helping Ross, K5SRT, make his first HF QSO from his home QTH. The contact was in LSB on 75 meters. In the process, Ross learned how to design and build an HF antenna, make measurements with a 50 ohm dummy load, learn about and connect up a manual antenna tuner, learn about PI networks and how to tune one up properly. Of course this was first into the 50 ohm dummy load and then into his homebrew antenna. Ross was using a 'part solid state-part tube Hybrid" transceiver from the 1980's era. His Kenwood HF transceiver, model TS-530S, has two 6146B tubes in the final RF amplifier. In the past, part of passing the FCC exam was demonstrating an understanding of tuned RF circuits. It would be great if more new hams learned how properly and quickly to tune RF tank circuits. Witness the long tune-ups that still exist on the HF bands today. Some go on for three to five minutes as they attempt to squeeze out those last few watts.

For reference, the difference between 50 watts and 100 watts is 3db. Now each receive S-unit is 6db. So, the difference between a 50 watt and a 100 watt transmitter at the receiving end is about ½ S-unit. The difference between 100 watts and 1000 watts is 10db. This would be about 1-1/2+ S units at the receiving end. Of course, all the RCARC members have and use 50 Ohm loads to tune their transmitters and amplifiers before placing them on the air. Right?

Bob, KC4UAI, has completed installation of the latest software upgrade to W5ROK's Yaesu FT-2000 and Digital management unit. I did have a chance to try out the Ham Radio Deluxe software he installed last month and was so impressed that I plan to install it at K3NT.

Last month, I reported that since last October our W5ROK station has been plagued with wideband noise that is very bad on 80, 40 and 20 meters. This noise is coming from a new energy controller installed for an air handler in the same penthouse where our main HF/VHF/UHF antennas are located. Help is still requested in capturing the noise data as viewed on the Yaesu Spectrum display and formatting this information for presentation to the manufacturer of the controller for a solution to this RFI.

W5ROK Repeater maintenance status has changed little as members have been involved with the K3. The weather is getting warmer so any additional help would be appreciated. Our packet BBS has developed an issue and has become priority. Once this maintenance is complete, the new 1.2 Ghz repeater installation is next.

Ross, K5SRT, and family have completed mailing all the QSL cards received for the Collins 75th Anniversary special event.

Mike Schmitt, WA9WCC, has borrowed the club's Small Wonder Labs PSK-20 1 Watt Transceiver and is setting up DigiPan software to operate PSK-31. If you have experience with PSK-31, please give Mike a hand. See the club roster for his contact information

January RCARC Activities:

- Collins 75th Anniversary Collins Radio Special Event QSL mailings – Ross Terry, K5SRT
- ARRL Jan VHF Sweepstakes.- Dennis Cobb, WA8ZBT
- Meeting Refreshments Setup Volunteer Dwight Ramsey, KE5SAS & Ross Terry, K5SRT (more helpers please)
- RCARC Marketing Joe Wolf, N5UIC;
- Station Tour Bob Kirby, K3NT
- RCARC Digital project Robert Diepenbrock, KC4UAI; Bob Kirby, K3NT
- Yet Another Great SIGNALS Newsletter Jim Skinner, WB0UNI
- Treasurers Report Jim Gaston, KD5GYD
- Club Librarian Stephanie Keese, AC5NF
- · Website Updates Wayne Hughes, WA0TGH
- January Program John Champa, K8OCL, Loney Duncan, W0GZV,
- RCARC Membership Applications & Database Joe Wolf, N5UIC
- Secretary Report –Dwight Ramsey, KE5SAS
- Station Trustee Steve Phillips, K6JT
- Vice President Report Sidney Ross Terry, K5SRT

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

Secretary's Report

Bob Kirby opened the meeting at 1730 (January 22nd 2009), in the Dallas Conference Room. Present at the meeting were:

Bob Ashby John Champa	K5JHR K80CL	Charles Beis Mike Cisco	K5UWD Visitor
John Coleman	Visitor	Bob Coulbourne	W4FTD
Bob Diepenbrock	KC4UAI	Tim Dubose	Visitor
Jeannie Duncan	XYL	Loney Duncan	W0GZV
James Gaston	KD5GYD	Will Heckman	Visitor
Joe Henchal	KF5G	Wayne Hughes	WA0TGH
Robert Kirby	K3NT	Ed Kucmierz	KB5SFE
Terry Leonard	Visitor	James Pellegrino	KE5SAR
Steve Phillips	K6JT	Dwight Ramsey	KE5SAS
Mike Schmit	WA9WCC	Bill Swan	K5MWC
Ross Terry	K5SRT	Joseph Wolf	N5UIC

1. Officer Reports

a. President's Report: Bob K3NT reported that he has been active completing and successfully testing over the air, the Elecraft K3/100 radio on CW and SSB at 10 watts. He has also installed the 100 watt amplifier. Several other club members have volunteered to further test this new club radio in its other modes of operation. Bob is managing this testing activity and should be contacted by interested parties.

- b. Vice-President's Report: Ross Terry K5SRT Indicated that the 75th Anniversary QSL cards have been received from Cedar. We are in the process of processing the cards to be sent
- Secretary's Report: Dwight Ramsey, KE5SAS. The report was accepted as published in the December Signals newsletter.
- d. Treasurers Report: Jim Gaston KD5GYD, Reviewed the club's financial balance sheet. The report was accepted.
- e. Station Trustee's Report: There was no Station Trustee's report
- f. Activities Chairman Report: John Champa reported he is investigating having the Aubonet-3 (Balloon project) as the subject of next month's talk.

2. Old Business

a. Corporate Funding: Bob indicated that we had received our funding from corporate. The discussion that followed indicated that the club should strive to make our club's contributions more visible to corporate and to the employees

3. New Business

- a. 50 / 50 Contest: The 50/50 drawing funds support refreshments at RCARC meetings and other club activities.
- b. Call For Richardson Siren Alert Support: Bob: K3NT indicated that the city of Richardson needed volunteers to monitor it's 22 sirens for sound and rotation. The alert occurs at noon the first Wednesday of each a month. Bob will send out contact information on this to the membership in upcoming emails.
- c. Promoting our clubs: Mike WA9WCC suggested that the club investigate designing/obtaining Tee-shirts with all the RC clubs call signs to wear during special events. Does anyone have an idea for the artwork? Call Ross Terry with ideas.
- John Champa reported he is investigating having the Aubonet-3(Balloon project) as the subject of next month's talk.

Bill Swan K5MWC introduced Loney Duncan W0GZV. The presentation reviewed the need, history and development of the undisputedly most technically advanced HF airborne radio of WW-2. Loney shared his always personal and sometimes humorous adventures of this radio and the other renown Collins Radio contributors. After the presentation he answered numerous questions from the large audience that had gathered to hear him speak. Mr. Duncan was employed with Collins Radio and Rockwell International for almost 41 years and proved to be a fountain of accurate technical information and interesting history.

Events and Public Service Ops

7-8 March 2009 ARRL International DX Con-

test (Phone): The object of this event is for W/VE amateurs to work as many amateur stations in as many DXCC countries of the world as possible on 160, 80, 40, 20, 15, and 10 meter bands. Foreign amateurs (also including KH6, KL7, CY9, and CYØ) work as many W/VE stations in as many of the 48 contiguous states and provinces as possible. The event starts at 0000 UTC Saturday; ends 2400 UTC Sunday (March 7-8, 2009). More info at http://www.arrl.org/contests/rules/2009/intldx.html

Activities Corner By John Champa, K8OCL,

RCARC Activities Chairman

ARBONET-3 is Coming! And then going to the edge of outer space! On Sunday March 28th Amateur Radio operators will launch a helium-filled weather balloon. Below the ballooon will be suspended a bunch of very interesting Ham gear, including an SSTV station and a cross-band repeater. They are trying to beat an altitude record set by the Amateur Radio Group at Cornell university.125,000 feet! The more complex flight mission will require more radio volunteers on the ground to track, chase, and recover the payloads.

Another exciting mission, ARBONET-4, is planned for this fall and the gear can be re-used, if it is properly recovered. That is where APRS and dual-band rigs come in handy, but they are not requirements to help chase or volunteer in other capacities.

ARBONET stands for Amateur Radio Balloons Over North East Texas, but some of the flights have ranged into the edge of Oklahoma and Arkansas. ARBONET-3 will be launch from the Clarksville Airport, Clarkville, TX (33.5932 N 95.0635 W). The flights only take about 3-4 hours, so there is always a great BBQ at the end of the day for an informal mission "debriefing" (HI).

In the mean time, check into the ARBONET local FM radio net every Wednesday evening at 8:30 PM Central. It is held on one of these three linked local 440 MHz FM repeaters:

DALLAS: 442.025 MHz Offset +5 MHz, PL Tone 127.3 FT. WORTH: 443.450 MHz Offset +5MHz, PL Tone 127.3 McKINNEY: 442.575 MHz Offset +5MHz, PL Tone 127.3

One of these is very likely within range of your station, so join in on the fun!

Also, during the ARBONET-3 Mission there will be a 75M SSB Net on 3.910 MHz, +/- kHz for QRM. The net originates at ARBONET Mission Control in Clarksville and it will be on the air from 8:30AM Central, through the launch, until recovery.

Hope to see you there! Until Thursday, 73 and stay well! Vy 73, John K8OCL

signals).

Preliminary Review of the Elecraft K3 on CWBy Steve K6JT

I was privileged to be one of the first club members (after Bob and Dennis) to bring the club's new Elecraft K3 transceiver into my home setup to test its capabilities for CW traffic handling. I also experimented a bit with the data mode (RTTY) to see how well it could decode the received signals (pretty well with strong

Upon receiving the unit and manual from Bob, K3NT, I spent some time familiarizing myself with its basic operation. The K3 is a very complex piece of equipment (compared to my Ten Tec Jupiter) with a lot of dual-function pushbuttons, knobs, and multifunction display. Our K3 has the 100 watt amplifier and 100 watt antenna tuner options as well as crystal filters for SSB (2.8 KHz), Data (1.0 KHz), and CW/Data (400 Hz). Besides the "hard" filters, the DSP filtering can be configured down to as narrow as 50 Hz

It probably took me 20 minutes to learn the basic operating functions and options I would need for my CW traffic handling and another hour or so of experimenting with the settings to get them working the way I wanted. This is not a "plug and play" radio by

any means, although you can get on the air right away with basic operations. I had a little trouble with the CW settings for QSK (full break-in) and associated VOX keying. I finally had to read more details in the manual to get it working. It has built-in CW decode (which worked pretty well), although I quickly turned that off since it forces the AGC to "slow", which is not good for QSK operation (need fast AGC).

The receiver worked guite well, with excellent sensitivity (never needed to use the preamp, even for weak west coast stations with whom I regularly exchange traffic), and great selectivity with multiple options (again, you have to do a little reading to get this set up right). The noise blanker was not really needed, but the noise reduction settings (the lower values - higher ones decreased sensitivity too much) did a lot to reduce listening fatigue on the noisy 80 meter band. I heard a number of French stations on 20 meters during the French national QSO party, all good copy, even with weak signals. The only problem I had was with the high noise level on 80 meters causing what could be called "ringing" of the DSP filters. This problem has been reported to Elecraft and further testing will be done to see if it can be alleviated. The problem was not severe on 40 meters or higher frequencies, so I suspect it is due to the high noise level (S4 to S5) on the 80 meter band at my location.

One problem I am plagued with here is a noise band about 5 KHz wide that wanders up and down between about 3550 and 3570. It is about S7 to S8 and very annoying. My suspicion is that it comes from either a neighbor's plasma TV or perhaps the Verizon FIOS system used by some of the neighbors. At any rate, it is quite bothersome on my Jupiter. On the K3, by setting the selectivity to 100 Hz or lower and engaging the noise reduction, I was able to more easily copy signals through the bothersome noise. A tribute to its receive capabilities.

Now for the transmit part. As I said, I only used it on CW. I was able to plug in my paddle and immediately have access to the internal keyer, which worked well and has a convenient knob on the panel to change the speed. I believe the speed calibration is "low", though. I set it to 20 wpm for normal TEX net operation and 25 for chatting and some of the higher level nets. But I think the actual speed was closer to 23 on the net and perhaps 28 or 29 wpm when it said 25. Not a big deal. I also found that the transmit power could be set to a value of 120 watts. However, when that was done, the keying became what a local station called "mushy". Setting it back to 100 watts cleared that up (so remember to only run it at the rated 100 watts on CW).

The QSK simply did not work as well as on my Ten Tec. I was somewhat disappointed with that. On the Ten Tec, I can hear signals easily between letters at 25 wpm, and even between dots at slower speeds. On the K3, the receive sensitivity (and filter "ringing") did not "recover" quickly enough, even with fast AGC, to give the same result. I could hear signals between words, but not between letters very well. Furthermore, the CW sidetone was not a pure tone, with annoying clicks and a somewhat raspy sound, further making QSK operation less than ideal. This was also reported to Elecraft and they suggested that it may be due to running the rig from a storage battery (which is my standard "power supply"). I did observe voltage "sag" down to about 11 volts on transmit. Further testing will be done with a "stiff" power supply to see if that alleviates the observed problems. To be sure, it is "good enough" for DXing, contesting (especially Field Day) and casual operation, but it is just not what I am used to for higher speed traffic handling. Considering that we CW traffic

hounds make up less than .01% of the ham population, the K3 QSK should be sufficient for the other 99.99%.

There are some nice "tools" for CW, including a "center tune" indicator (CWT), similar to the FT-2000 (but the FT-2000's is a little better), and a "spot" button that will tune to a signal being received when CWT is active. However, I found that I could set the frequency better without CWT by using the spot tone function and tuning for the same offset tone (I use a fairly low tone of 440 Hz). With a lot of signals, such as on Field Day, the automatic function would likely not work. The "CWT" indicator takes up the space on the high end of the digital S-Meter, limiting its indication to S9 (which is OK for most uses). But the center tune will be very useful for Field Day and other contest operation where there are a lot of signals very close together in frequency. It flashes in sync with the received signal. The 50 Hz filter setting is a little too narrow for higher CW speeds, but 100 Hz works well up to about 35 wpm. There is a bit of "echo" sound to the narrow DSP filtering modes, but as mentioned, further testing will be done per Elecraft recommendations.

I tried out the RTTY decode function and found the CWT indicator, which changes to a dual-segment display for the 2 RTTY tones, worked well in the DATA mode. I got good copy from stations that were at least S7 in signal strength, although there were some errors in the decoded stream. I did not try transmitting on RTTY, although I could have, considering the K3 has a nifty CW to DATA conversion mode where you can send in CW and it translates to RTTY (or PSK-31) for output transmission. I'll let the DATA aficionados test that mode. Likewise, I'll let some of the SSB operators check out the K3 using that mode.

Overall, I found the K3 to be a very good rig, the QSK and CW sidetone problems notwithstanding. I would rate its receiver as good as (or even a little better than) our FT-2000, and it is an order of magnitude better than the TS-2000. It will be a great radio for CW operation on the next Field Day. I should have a short follow-up report for next month regarding the QSK and filter ringing problem resolution. 73, Steve

IT'S THAT TIME OF YEAR AGAIN

An invitation to come join the Irving Amateur Radio Club Inc. 7th Annual Hamfest.

Sat. March 14, 2009.

With more door prizes than ever!

Go to the website for information on prizes

Register online www.irvingarc.org/hamfest.htm

Early registration prices good thru Mar. 8, 2009.

Pay with paypal by clicking on Pay Pal

Irving Amateur Radio Club, Inc.

www.irvingarc.org

Secretary, Coleta M. Taylor KD5QFH Ph # 972-579-9089

coleta.mt@verizon.net kd5qfh@arrl.net



2009 W5DXCC DX Dinner

The Lone Star DX Association is pleased to sponsor the 2009 W5DXCC DX Dinner in conjunction with Ham-Com. The dinner will be Friday evening, June 12, at the Plano Centre in the Windhaven Room. This is the same location as 2007.

The evening will begin with a cash hospitality bar in the Plano Centre from 5:00 to 6:30. Dinner activities will begin promptly at 6:30.

This year we will have a served meal of Char-Broil Prime Rib with salad, rolls, baked potato, seasoned vegetables, and cheesecake for desert. A vegetarian option will be available upon request. Reserved seating for groups will be available. Please email requests for group seating and/or the vegetarian option to n5ty <at> arrl <dot> net.

The DX dinner program for the 2009 W5DXCC will be the 2009 K5D Desecheo DXpedition (www.kp5.us). Desecheo is very rare being the 6th most needed DXCC entity worldwide. On October 1, 2008, the U.S. Fish and Wildlife Service (USFWS) selected the KP1-5 Project team led by K4UEE and W0GJ to be the first USFWS-approved DXpedition to Desecheo Island in fifteen years. DXpedition co-leader Bob Allphin, K4UEE will present what promises to be a very interesting program.

Several major door prizes will be given away again this year. A list will be available on the LSDXA website (www.dxer.org) as soon as prizes are firmed up.

Ticket price is \$40 and can be purchased via the "Admission" link on the Ham-Com Website, www.hamcom.org. Because of the banquet room capacity, a maximum of 200 tickets will be sold. Tickets must be ordered before midnight, May 30 and can be picked up at the Lone Star DX Association booth.



ARRL Arkansas 2009 State Convention

Benton County Radio Operators

Saturday, April 25th, 2009 8:00 AM to 2:30 PM

Location

Rogers First Church of the Nazarene 4911 W. Pleasant Grove Rd. Rogers, AR

Talk-in

145.290MHz Standard Negative Offset, PL Tone 110.9

Admission

\$5.00 per person in advance \$6.00 per person at the door

Tables

\$5.00 each in advance \$6.00 at the door

Food and Drinks will be available

Many Great Vendors Attending Hourly Door Prizes Forums VE Testing

Walk-ins are welcome

For More Info Contact:

Jay Harrison - KCØCNB 479.631.7727 Phone 479.644.6646 Cell

E-mail: Texgun19@cox.net

For up to date information and to download a registration form: http://bentoncoradiooperators.org/BCRO Hamfest2009.htm

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56. Staff

59. Brain wave

61. Soldering tools

65. OOTC mem-

bers

66. Jamaica

67. Bigger than pi-

68. Bosses on 40acrosses

69. Small dwellings

70. Isle of Man prefix

Down

- 1. Needer of too many fills
- 2. New year's nr
- 3. Traffic handling award
- 4. Words before band, on an FCC citation? 5. W6YX

6. Noble I-land family name

- 7. Tennis whiz
- 8. Characters before seventy three
- 9. Entry class
- 10. Early radio parts maker
- 11. 9RN place
- 12. A 30-down, in W2-land
- 13. An end to perfection?
- 21. Ready follower?
- 23. Transistor type
- 24. Long haul 52-across
- 25. Common preamble item
- 26. Where a radiogram enters the ether
- 27. Fox or turkey follower
- 28. Guy wire hardware items
- 29. back
- 30. ARRL unit
- 33. Word count
- 36. Batt. term. label
- 38. 7 MHz timer
- 40. Pre-LED amber light
- 41. Spreading, as with cream cheese
- 43. EA talk
- 46. Health resort
- 47. Forever
- 48. Humor newspaper nameplate middle
- 51. Places to find antenna restrictions
- 53. Filter maker
- 55. RTTY conveyance
- 56. Area net for 11-down
- 57. RX ckt.
- 58. Old video game inits.
- 60. Was CR8, once
- 62. Band breaker
- 63. Dahdit, in F-land
- 64. Dir. from W2 to LU

BUY, SELL AND TRADE

SIXY

|H|U|T|S

This month's Puzzler Solution

MAAM

ECRU

DELL

H O P

TWORN

OMICRON

NET

ONAIR

ENNSPOKANE

S lι

TIIPOFFS

LIAISON

|S|H|U|N|T

I R O N S

N|A|N|O|S

GDONE

T N C

LOBOS

INPUT

DELTA

CUTNR

STEED

CANE

AGED

N C S S

TRAFFIC

KINGSEC

E A N

DEADPAN

ICOM IC-756PROII I am selling the IC-756PROII which has been my backup HF rig. I haven't used it much since I got the FT-2000D so it is for sale. The IC-756PROII is in mint condition with manual, power cable, hand mic, and box. Local pick-up buyer also gets homebrew computer interface and homebrew external voice and CW memory keyer control similar to the I-Mate. \$1,500 firm

Dave Jaksa, W0VX 972-495-0048 w0vx@arrl.net

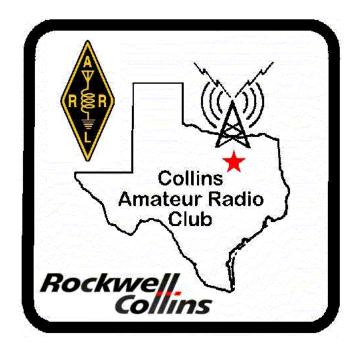
Across

- 1. Rock band Los ___
- 6. Polite XYL title
- 10. Cooper maker
- 14. Amplifier connector label, say
- 15. Light beige
- 16. Coax elbows
- 17. Loop type
- 18. Apple competitor
- 19. Phony DX
- 20. Sign in a radio station
- 22. Packet ckt.
- 24. NTS rock band?
- **27.** Clues
- 31. Bamboozle
- 32. SV letter
- **34.** B4, of yore
- 35. CW shorthand item
- 37. Single- or multi-, in propagation
- 38. Gator's cousin
- 39. Knight's need
- 40. NTS unit
- 41. Type of feed
- 42. Globe transmitter
- 43. ARRL volunteer official
- 44. Prefix with -single
- 45. Good report, using 35-acrosses
- 46. W7 city
- 49. 76, 77 and 78 maker
- 50. Expressionless
- **52.** Illicit rendezvous station?
- 54. Area net for 55-across
- 55. Region net for 12-down

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 26 February 2009

1700 Fellowship 1730 Meeting

Rockwell Collins Building 462
Dallas Conference Room

NEXT SIGNALS DEADLINE: 16 March 2009