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# SIGNALS

Rockwell  
Collins **Amateur Radio Club**

Monthly Newsletter of the

Volume 29 Issue 09

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

June 2008

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**RCARC**  
**Membership Meeting**

**\*Thursday\***  
**\*26 June 2008\***  
**1700 Fellowship**  
**1730 Meeting**  
**Rockwell Collins Cafeteria**

**Subject: The State of Amateur Radio**  
by Coy Day, N5OK, ARRL West Gulf  
Division Director

**Welcome New Members** The following Amateurs have recently joined RCARC:

Chuck Samuel	K7NWM
Mike Schmit	WA9WCC

## Upcoming Events and Public Service Ops



**It's Ham-Com's 30th Anniversary! This is one Ham-Com you don't want to miss!**

Join us at the Plano Centre, Friday and Saturday, June 13 and 14, 2008. Admission at the door will be \$10.00 (family members \$8.00). Students K-12 and Scouts in uniform receive FREE admission. Visit [www.hamcom.org](http://www.hamcom.org) to purchase admission before the deadline!

**To help celebrate our 30th anniversary, Ham-Com will give away a Yaesu FT-857D HF-UHF multi-mode transceiver each day at 5:00 p.m. And, every hour, a ticket will be drawn for an Alinco DJ-V17T 2-meter HT. A total of 18 Alinco HTs will be given away during the two-day event.\***

Ham-Com has sold every commercial space in the exhibit hall and then some. Visit [www.hamcom.org](http://www.hamcom.org) to see a list of the 40 exhibitors and commercial vendors signed up for this event. The expanded indoor flea market with 60 tables is completely sold out. There is still space available in the outdoor flea market and there are 60 spaces allocated for the tailgate market. Visit [www.hamcom.org](http://www.hamcom.org) for more

information about space in one of the outdoor markets.

Ham-Com will host the ARRL West Gulf Division Convention and there will be over 80 hours of speakers, workshops and interest group meetings. Click here to see a program list. Be sure to visit [www.hamcom.org](http://www.hamcom.org) on May 19 to download your full-color copy of the "Ham-Com Flyer."

The Lone Star DX dinner still has tickets available! This year's DX dinner speaker is Eric Scaze, K3NA, co-leader of the VP6DX Ducie Island DXpedition. The DX dinner will be held at the Holiday Inn Express, Ham-Com's headquarters hotel. The prize list for dinner participants is phenomenal! Visit [www.hamcom.org](http://www.hamcom.org) to purchase DX dinner tickets before the event is sold out!

Parking space has been increased at the Plano Centre. We've done everything possible to make parking more convenient including providing over 40 spaces next to the building (on the west side; hang tag or special plates are required to access this area) for people with special needs. We also moved the tailgate market closer to the building.

Featured speakers this year include Ward Silver, N0AX, author of "Ham Radio for Dummies," long-time DXer and contributing editor to QST. He has been licensed since 1972 and has received two QST cover plaques for his contributions to the magazine. He was the 2003 recipient of the Bill Orr Technical Writing Award. Ward stays busy as a member of the ARRL's Contest Advisory Committee and as a director of the YASME Foundation. He was a member (Cont. on page 5)

## Local Club News

**Meeting Notice** All club members are strongly encouraged to attend this months meeting! We are honored to have Coy Day, N5OK, our American Radio Relay League (ARRL) West Gulf Division Director and member of the ARRL Board address us regarding the significant issues facing Radio Amateurs in the months ahead. Here is your chance to ask that question you have had in your mind! No more of that "If THEY would only....etc." Now the "they" will be here with us, so get your questions and concerns ready, write them down, and then come to this important meeting. 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.

**R-CARC OFFICERS****PRESIDENT**

**Bob Kirby** **K3NT**  
**319.360.0500**  
 k3nt@arrl.net

**VICE PRESIDENT**

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**461-290**

**NEWSLETTER EDITOR**

**Jim Skinner** **WB0UNI**  
**972.690.9612**  
 wb0uni@arrl.net

**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**

Last months presentation on Radio controlled Aircraft was well attended both on-site and via teleconference. If you were not able to attend, you will find the presentations in the 'members only' presentation's section of our website: <http://w5rok.us/>. Our third RCARC Amateur Radio Class will have taken place with testing on June 12<sup>th</sup>. Thanks to all that worked so hard to make this happen. Thanks also to those working on and volunteering for W5ROK 2008 Field Day, June 28,29, 2008. Do not forget these operating items: Special Event - 50th Anniversary of the Collins S-line July 12- Special Event - 75th Anniversary of Collins Radio September 20-26 See more details in this issue.

- New Member – Welcome Chuck Samuel, K7NWM; Mike Schmit, WA9WCC
- Extra Class Upgrade - Jim Pellegrino, KE5SAR
- May Fun Day's – Ms Karen Feder.; John Champa, K8OCL; Robert Diepenbrock, KC4UAI; Dwight Ramsey, KE5SAS; Jim Skinner, WB0UNI; Steve Philips, K6JT; Ross Terry, KE5SZJ; Andrew Robinson, KE5SAK; Jim Pellegrino, KE5SAR; Wayne Hughes, WA0TGH
- Third Ham Radio Class – John Champa, K8OCL; Mike Hollingsworth, W5QH; Wayne Hughes, WA0TGH; Robert Diepenbrock, KC4UAI; George Deprez, KE5SAQ; John McFadden, K5TIP
- TX Star Party – George Huling, K5GH
- W5ROK Collins S-Line Station work – Bob Ashby, K5JHR
- W5ROK Telecommunications/LAN/WLAN/HSMM – Ross Terry, KE5SZJ; Robert Diepenbrock, KC4UAI; John Champa, K8OCL
- Meeting Refreshments Setup Volunteer – Jim Skinner, WB0UNI (more helpers please)
- Submitted Newsletters Article-
- RCARC Marketing – Joe Wolf, N5UIC; Mike Hollingsworth, W5QH
- New Member Station Tour - No report this month
- RCARC Rotor Repair – Dennis Cobb, WA8ZBT

- Yet Another Great SIGNALS Newsletter – Jim Skinner, WB0UNI
- Treasurers Report – Jim Skinner, WB0UNI
- Club Librarian - Stephanie Keese, AC5NF, with John, K8OCL assisting
- Website Updates - Wayne Hughes, WA0TGH
- June Program - John Champa, K8OCL; Coy Day
- RCARC Membership Applications & Database - Joe Wolf, N5UIC
- Secretary Report –Jim Gaston, KD5GYD
- Station Trustee – Steve Phillips, K6JT
- Member Profile Responder – No response this month
- CRARC (W0CXX) - WriteLog Program for our Special events operation
- Great Homemade cake – Rose Skinner
- Homemade cookies – Cindy Kirby

Be sure to read the well-written article, “Build Your Own Capacitors for Trap Antennas “ by guest author, Phil Salas, AD5X, in this issue. Phil is the father of our member Stephanie Keese, AC5NF. You may also recognize Phil as the author of “The Weekender” monthly columns in CQ magazine. If you enjoyed this article, please take a minute and e-mail your comments and thanks to Phil.

### RCARC June Meeting

As you may be aware RCARC is an American Radio Relay League (ARRL) affiliated club. Our West Gulf Division Director is Coy Day, N5OK. Coy lives in Union City, OK and is scheduled to be our guest speaker for the June 26<sup>th</sup> 2008 meeting. Bob started out as a short wave listener in about 1949. He is a very experienced radio operator with DXCC #1 HONOR ROLL, 8 Band DXCC, numerous ARRL International DX Contest Certificates, numerous CQWW DX and CQ Prefix Contest Certificates.

Suggest all members visit <http://www.westgulfdivision.org/> to learn about our ARRL division and generate your list of questions for Coy. Feel free to send yours to me and we will batch them together for Coy to address at the June meeting.

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 that again this month **we will start gathering at 5PM**. Mr. Champa advised there would be some snacks. Our world famous coffee will be available. 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. Don't forget the 50-50 raffle. Tickets are \$2 each, 3 for \$5 and 7 for \$10. The proceeds are used to help support club activities such as refreshments at our meetings. Last month, some additional small-donated prizes were again added thanks to John, K8OCL and John, K5TIP. Thanks to both! Understand their wives were happy to see more these items find a good home.

Hope to see or hear you at the meeting.

Best Regards (73),  
Bob Kirby, K3NT  
[K3nt@arrl.net](mailto:K3nt@arrl.net)  
<http://w5rok.us>

## Secretary's Report

Bob Kirby, K3NT, opened the meeting at 1740 (May 22<sup>nd</sup> 2008), in the RCI Cafeteria. Present at the meeting were:

John Champa	K8OCL
Dennis Cobb	WA8ZBT
Bob Coulbourne	W4FTD (Tel)
James Gaston	KD5GYD
Hank Harwell	WA5MSK
Michael Hinds	N0EUN (Tel)
Larry Kerns	KA5TGP
Doug Kilgore	KD5OUG
Bob Kirby	K3NT
John McFadden	K5TIP
James Pellegrino	KE5SAR
Chuck Samuel	K7NWM
Mike Schmit	WA9WCC
James Skinner	WB0UNI
Ross Terry	KE5SZJ
Joseph Wolf	N5UIC
Blaine Yarbrough	
Luke Yarbrough	K5LCY

The following business was conducted:

### 1. Officer Reports

#### a. *President's Report:*

- Bob Kirby, K3NT, reminded everyone of the upcoming events such as the 50<sup>th</sup> Anniversary of the Collins S-Line (July 12<sup>th</sup>-20<sup>th</sup>) and the 75<sup>th</sup> Anniversary of Collins Radio (September 20<sup>th</sup>-26<sup>th</sup>) as well as Ham-Com. Many of the details for these events are provided in the May issue of SIGNALS.
- Reminder to all club members that we will be using the Write-Log software to log contacts during the upcoming events. (More information on the WriteLog application can be found at <http://www.writelog.com/>.)
- Ken Piletic, W9ZMR, was able to record last months program “A General Overview of the APRS System” which was presented by Bob Bruninga, WB4APR. The audio and PowerPoint slides are in the members only section of the club's web site. This provides a great opportunity for those who were not able to attend last months meeting to review the ARPS material.
- A special welcome to our newest members John Jacobson, K5XRF and Chuck Samuel, K7NWM

#### b. *Vice-President's Report:*

- Dennis Cobb, WA8ZBT, was not able to attend in time for the report, but Bob Kirby, K3NT, provided his report.
- The repeater is still having some problems (sensitivity is low) and the rotor is also in need of repair.
- Volunteers are needed to form work crews to help get these issues resolved before the upcoming events.
- Also, new MFJ clocks have been purchased that provide UTC and Local time. These will be in the clubs shack for use during the upcoming events.

#### c. *Secretary's Report:* The meeting minutes published in last month's newsletter were accepted without amendments.

- d. *Treasurers Report*: Jim Skinner, WB0UNI, summarized the treasurer's report. Some corrections have been made since the last meeting due to some missing bank statements.
- e. *Station Trustee's Report*: Steve Phillips, K6JT, was unable to attend due to family business—there was no Station Trustee's report.
- f. *Activities Chairman Report*:
- John Champa, K8OCL, reviewed next month's program which will be a presentation by Coy Day, N5OK, the Director of the West Gulf Division of ARRL. This is great opportunity to discuss the current direction of HAM radio with a member of the ARRL executive team. We plan on having numerous League handouts available.
  - Thank you to everyone who helped the club participate in the Rockwell Collins Fun Days. Many contacts were made during the two day recreational event. This also helped spark additional interest in the upcoming HAM class.
  - A special thank you to John McFadden, K5TIP, who suggested the topic for tonight's program, UAVs and RC Aircraft.
2. Old Business
- a. There was no old business to conduct.
3. New Business
- a. *HAM Classes*: 12 new students have signed up for the 3<sup>rd</sup> HAM License class. Anyone interested in taking a license exam is encouraged to take advantage of VEC testing at RCI coming up on Thursday June 12<sup>th</sup>.
- b. *Rotor Repair*: John McFadden, K5TIP, suggested that we consider replacing the damaged Rotor. We have had problems with the rotor for several years. The club will be investigating options for the rotor which include repair and/or replacement.
- c. *Collins Radio Anniversaries*: July will mark the 50<sup>th</sup> anniversary of the Collins S-Line and September will be the 75<sup>th</sup> anniversary of Collins Radio. To commemorate

these milestones there will be several events involving all the Rockwell Collins clubs including Cedar Rapids, Tuscan, Melbourne, and France. The Cedar Rapids club has purchased the WriteLog software for use by all Collins Radio clubs. This will allow all the sites to log contacts in a common package. (More information on the Write-Log application can be found at <http://www.writelog.com/>)

- d. *Upcoming HAM Radio Class*: John Champa, K8OCL, reported that additional classes are planned but have not yet been scheduled. Right now 4 people have expressed interest. (For more information on the class can be found at: [http://w5rok.us/ham\\_classes/2007\\_nov\\_dec\\_ham\\_class\\_announcement.htm](http://w5rok.us/ham_classes/2007_nov_dec_ham_class_announcement.htm))
- e. *50 / 50 Drawing*: The 50/50 drawing raised \$15 for the club. This goes to support refreshments at the meetings and other club activities. The winners were:  
Terry Ross, KE5SZJ - \$15 and a subscription to CQ Magazine  
Chuck Samuel, K7NWM - BNC Connectors and ARRL's Wire Antenna Classics

John Champa, K8OCL, introduced the evenings program "UAVs & The Hobby World" presented by Larry Kerns, KA5TGP. Larry provided an excellent overview of the current types of UAVs and the future of UAVs. Larry also explained the basics of the Remote Control (RC) Aircraft hobby and recent advancements such as the Paparazzi open-source project which provides autonomous aircraft capabilities to hobbyist.

After the presentation Larry Kerns, KA5TGP, loaded the RC Aircraft Simulator, RealFlight-4, and several club members tried their hand at flying a virtual RC plane.

Luke Yarbrough, K5LCY, of MBI Hobbies ([www.rushrc.com](http://www.rushrc.com)), brought out several Remote Control Helicopters which he demonstrated. Luke also brought additional information on the RC hobby and several upcoming RC events such as the D/FW Jet Rodeo ([www.ndrcc.com](http://www.ndrcc.com)) coming up on June 13<sup>th</sup> through the 15<sup>th</sup>.

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

### An important and informative program for our June Meeting!

The RCARC has the honor of hosting the highest ARRL official in our area. He will talk with us on *The State of Amateur Radio!* He is not only a member of our beloved League's Board of Directors, but he is also on the ARRL Executive Committee. Coy's contact information is:

Coy C. Day, N5OK  
ARRL West Gulf Division Director  
20685 SW 29<sup>th</sup> Street  
Union City, OK 73090-9726  
(405-483-5632)  
n5ok@arrl.org

Coy is driving a long way to meet with us, so give him a good turnout!

### What is ahead for July?

Not one single club member has come forward with a single suggestion for a program of interest for our July meeting. So we have decided to have the world famous painter Yochanan Apmahc bring in his most recent artistic works so we can watch the paint dry on his canvas. Unfortunately, Dr. Apmahc will not be able to attend the meeting in person as he has a previously scheduled appointment with his proctologist. However, the wet paintings will be provided so that we can closely observe the paint drying.

HEY! Seriously folks! Doesn't anybody in this club have a preference for the topic they would like to see presented in a meeting? Did you leave your technical curiosity out in the rain and it just washed away? Come on folks! Give us some suggestions on what you would like to see in terms of a presentation and we will see what we can do to meet that expectation!

Well...we're waiting!

## 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 Gene Duprey, K1GD. Gene is a retired member that lives over 500 miles away in Cedar Rapids IA.

### How did you get started in Amateur Radio?

I got started when in Jr. High School, two of my neighbors were hams, and I got the bug from them.

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

My first QSO was with a ham in Arizona, I worked him 20 years later and I remembered his call when I first heard it. He

still had my QSL. My first DX QSO was Johnston Island.

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

I built my first transmitter, a 20 watt CW rig. Also built several Heathkit rigs, and test equipment. I also designed and built a 430 MHz receiver.

### Do you belong to the ARRL?

Not currently, but have been a member in the past, and will enroll again soon.

### Read any other Ham magazines, like CQ?

I read QST and CQ.

### What are your current Ham Radio interests?

HF QSO's mainly on 20 meters, with occasional QSO's on 80 meters. My station consists of a Collins S-Line , 32S-3, 75S-3B, 312B-4, 30L-1, Icom 775DSP transceiver. Antennas are all dipoles hung in the trees around the house. I am currently playing with a new Icom IC-7000 All Band rig (160 through 440). I also have a couple of 2/440 rigs, but not much use currently.

### What are your other hobbies?

Outside of HAM Radio, I am involved-with photography, 35 mm and now digital. I belong to an internet group called the LUG, or Leica Users Group, a group of photographers based all around the world.

### Are you active on any of the HF or VHF bands, Nets?

HF primarily, and I check into the Collins Collectors Assn. on 80 meters occasionally.

*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](mailto:k3nt@arrl.net)*

## Upcoming Events and Public Service Ops

**Ham-Com** (Cont from page 1) of the 2005 Kure Island K7C DXpedition. Also joining us this year is Gordon West, WB9NOA, noted author and teacher. He has authored numerous training texts and

multi-media materials used by thousands of new Hams and licensees upgrading to General and Extra class tickets.

**So, don't miss our 30th anniversary celebration. For complete information about the event visit [www.hamcom.org](http://www.hamcom.org).**

\* You must be present to win a Grand Prize or any of the hourly prizes.

### 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/V/E 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>**

### 12-13 July 2008: IARU HF World Championships

The object of this event is to contact as many other amateurs, especially IARU member society HQ stations, around the world as possible using the 160, 80, 40, 20, 15 and 10 meter bands **Date and Contest Period:** The second full weekend of July, **beginning 1200 UTC Saturday and ending 1200 UTC Sunday (July 12-13, 2008)**. Both Single and Multi operator stations may operate the entire 24-hour period. More info at <http://www.arrl.org/contests/rules/2008/iaru.html>

## Build Your Own Capacitors for Trap Antennas

By Phil Salas – AD5X

I currently have a 20/15/10 meter dipole, but nothing for 17- and 12-meters. Therefore, I decided to build a 17/12 meter trap dipole. I prefer the higher Q and lighter weight of discrete L/C traps as opposed to the coaxial traps that have become popular in recent years. In the past I've used doorknob capacitors for the trap "C", but these are getting hard to find and can be quite expensive. So – how about building our own trap capacitors?

A rule-of thumb for trap components is that their reactance should be from 150-250 ohms, which means a capacitance value of about 43pf to 26pf at my trap design frequency of 24.5 MHz.

For the capacitors, I decided to try using aluminum tape attached to the inside and outside of a piece of 1-1/4" PVC tubing. The aluminum tape is available at any hardware store, and is used to seal air conditioning duct-work. I chose a PVC tubing length of 1.8", as that is slightly longer than the 1.5" width of the aluminum tape I used.

I cut a 4.2" length of aluminum tape that I attached to the inside of the PVC pipe, and I cut a 5.5" piece of aluminum tape that was wrapped around the outside of the PVC pipe. When I measured the resulting capacitance with my antenna analyzer, I found it to be 35pf. This was perfect! So next I attached two #4 stainless steel screws, lockwashers, nuts and solder lugs to my homebrew capacitor. I cut away the aluminum tape such that one screw only contacted the upper piece of tape, and one screw contacted the lower piece of tape. Photo A shows this better than I can describe it. I built two of these capacitors, as two are needed for the 12/17 meter dipole.



Photo A: Homebrew capacitors showing the inside/outside screw contacts.

Next I coated the capacitors with liquid electrical tape, also available at your local hardware store. The liquid electrical tape does two things: First, it seals the aluminum tape in place. And second it improves voltage isolation around the edges of the tubing. Photo B shows one trap made with my homebrew capacitor alongside an earlier trap I built using a standard doorknob capaci-

tor. The red coating on the homebrew capacitor is the red liquid electrical tape I used.



Photo B: 12-Meter traps, one with the homebrew capacitor and one with a doorknob capacitor.

How do these traps work? Perfectly! Now I don't know what the ultimate breakdown voltage rating of these capacitors is, but there are no problems when using my 600 watt ALS-600 amplifier with the 12/17 meter dipole. However, I can't guarantee that the capacitors won't break down under full legal limit.

For those interested, the traps are constructed on 1"OD fiberglass tubes that I purchased from Max-Gain Systems ([www.mgs4u.com](http://www.mgs4u.com)). These tubes come in 8-foot lengths which makes them very expensive to ship. Max-Gain will cut the tubes in half for just \$0.50, which makes the tubes very inexpensive to ship.

Phil Salas – AD5X

**Lithium Battery Experiments** By John Champa, K8OCL  
Energizer® and other battery manufactures are producing the latest technology in consumer batteries: Lithium Ion. While that is nothing new, the wide scale availability of them in AA and AAA size is more recent.

These are not inexpensive cells. Home Depot® is selling them for approximately \$9 (USD) per four-pack! However, the manufacturer claims an average life span of 7x greater than conventional alkaline cells. Since many Radio Amateurs use a battery pack of alkaline cells to back-up their HT rechargeable Nickel Metal Hydride (NiMH) battery or Nickel Cadmium (NiCad) pack, I decided to investigate. I need to determine whether these new Lithium Ion cells are worth the extra investment. The research is ongoing, so please consider this an initial report and your feedback is welcome.

My first observation was a significantly longer shelf life claim. Typically manufactures claim a minimum 10-year shelf life for Lithium cells. This new package of Energizer e2 Lithium cells was labeled with an expiration date of 2020. That is a 13-year span from the current date of 2007! A similar package of new Energizer alkaline cells right next to it had an (Cont. on page 8)

## Rockwell Collins Amateur Radio Special Events

### 50th Anniversary of the Collins S-Line

**What:** The various facilities of Rockwell Collins' amateur radio clubs announce a special event: The 50<sup>th</sup> Anniversary of the introduction of the Collins S-Line special event will take place in July 2008.

**When:** Commencing 0001z 12 July 2008 and running through 2359z Sunday, 20 July 2008

**Who:** Look for the following stations on the bands:

W0CXX: Cedar Rapids, IA – South Campus, HQ Station

N0CXX: Cedar Rapids, IA – North Campus

W5R0K: Richardson, TX

W4CRC: Melbourne, FL

W6CXX: Tustin, CA

F6KNZ: Toulouse, France

**Where: (+/- QRM)**

**CW (kHz):** 3550, 7050, 10115, 14055, 18085, 21050, 24900, 28050

**SSB (kHz):** 3885, 7285, 14285, 18155, 21385, 24955, 28455

**How:** Operators will announce when they are QRV via Packet Cluster.

**QSL:** Via [www.qrz.com](http://www.qrz.com) for each different facility station. Please include a large #10 envelope SASE with enough postage or funds for first class return of QSL. No eQSL's

**Special Certificate:** Collect four (4) or more QSL's from 4 different facilities and mail them to: W0CXX. Collins Amateur Radio Club • 400 Collins Rd. NE • Cedar Rapids, IA • 52498

A special certificate and your QSL's will be returned to you.

**Info:** <http://w0cxx.us/> <http://w5rok.us/>

**Questions? Contact:** [w0cxx@rockwellcollins.com](mailto:w0cxx@rockwellcollins.com)

### 75th Anniversary of Collins Radio

**What:** The various facilities of Rockwell Collins' amateur radio clubs announce a special event: The 75<sup>th</sup> Anniversary of the incorporation of Collins Radio. The special event will take place in September 2008.

**When:** Commencing 0001z 20 September 2008 and running through 2359z 26 September 2008

**Who:** Look for the following stations on the bands:

W0CXX: Cedar Rapids, IA – South Campus, HQ Station

N0CXX: Cedar Rapids, IA – North Campus

W5R0K: Richardson, TX

W4CRC: Melbourne, FL

W6CXX: Tustin, CA

F6KNZ: Toulouse, France

**Where: (+/- QRM)**

**CW (kHz):** 3550, 7050, 10115, 14055, 18085, 21050, 24900, 28050

**SSB (kHz):** 3885, 7285, 14285, 18155, 21385, 24955, 28455

**How:** Operators will announce when they are QRV via Packet Cluster.

**QSL:** Via [www.qrz.com](http://www.qrz.com) for each different facility station. Please include a large #10 envelope SASE with enough postage or funds for first class return of QSL. No eQSL's

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**A boy's passport to the world** *By Joe DePriest, The Charlotte Observer, June 3, 2008*



*Cameron Hasson chats up the airways on the radio in his Gastonia bedroom. Cameron, 6, has earned his amateur radio license.*

Six-year-old Cameron Hasson's world just got a little larger. The amateur radio license he recently earned puts him in touch with folks from all over.

He's a bona fide "ham" – probably the youngest in North Carolina and maybe the U.S., according to his instructor, Joe Hullender with the Gastonia Area Amateur Radio Club.

All that talk going on out in radio land – endless conversations about the weather and gas prices and whatever – Cameron takes it all in.

The world has opened up. He feels more connected. And he also feels closer to his parents: Eric, a computer consultant, and Beverly, a physical therapist at Gaston Memorial Hospital. Studying in the same class, they all earned their amateur radio licenses together.

Ham radio, like fishing, is something I've always admired, but never had much luck with.

Eric Hasson, 46, got the radio bug as a kid in St. Louis. It came from his dad, Jack, who was into citizens band radio during the CB craze of the 1970s – the "Smokey and the Bandit" days. Eric decided to study for his ham license, but the FCC's requirement of testing for proficiency in Morse code was a brick wall for him.

His interest in electronics and computers grew as visions of being an amateur radio operator faded. Until the brick wall collapsed. In late 2006, the FCC did away with the Morse code requirement and Hasson started thinking about ham radio again.

The idea kicked around in his mind for a while. Then, in March, he enrolled in a six-week class sponsored by the Gastonia Area Amateur Radio Club. On the first day, Hasson

asked Hullender if a 6-year-old could learn the material. The answer was yes. Hasson asked Cameron if he'd like to try for a license. Cameron was game.

Two-way radio had already captured his imagination. He had a CB, a General Mobile Service and Dick Tracy-style Family Radio Service, complete with a Tracy wrist radio.

These radio services, which didn't require a license, gave his son a little more freedom, Eric Hasson said. His parents could check on him when he was out of sight and feel a greater sense of security.

When her husband and son signed up for the class, Beverly Hasson decided she'd join them.

The radio class was held at the Gaston County Police Community Room. Ages ranged from 6 to 76. The final exam had 35 multiple choice questions; to pass, you had to get 26 right.

Cameron wanted a technician class license – the beginner's level. Hullender remembers his youngest student as "kind of quiet and serious." A kid, maybe, but one who was really into the subject.

Every night at home, Cameron was tutored by his dad. They did research together on the computer. They waded through technical material. "It was hard," Cameron recalled.

Test day rolled around. Eric Hasson wasn't sure his son would pass. But he did.

Cameron wants to go up another notch and get a general radio license. He's a smart kid and will probably make it. But even if he doesn't, he's learned about focus and hard work and family togetherness. At 6, he's way ahead of the game.

*Joe DePriest: 704-868-7745; jdepriest@charlotteobserver.com*

**Lithium Battery Experiments** (*Cont. from page 6*) expiration date of 2013, or about a 6-year span. That is a big difference, but only about double the shelf life for the Lithium cells. So where does the "7x" claim originate? Under load?

The next observation was a significantly higher voltage output:

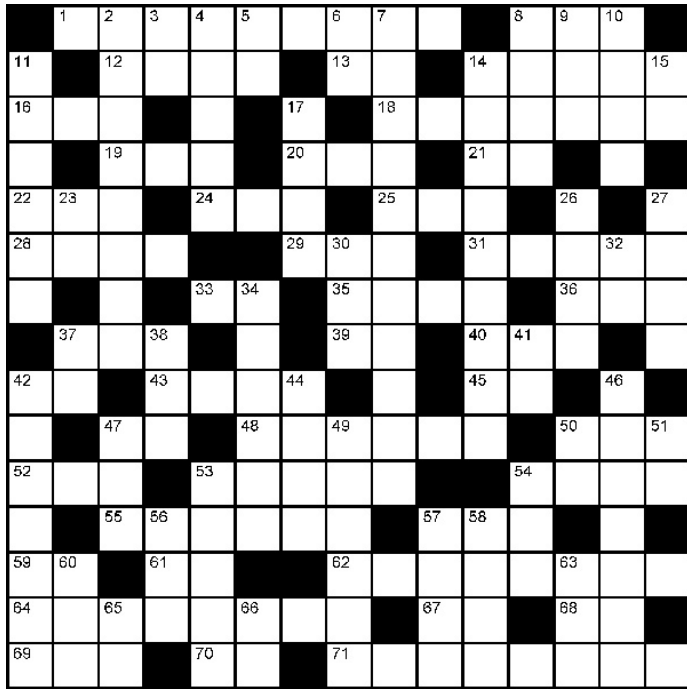
BATTERY TYPE	INITIAL OUTPUT VOLTAGE*
Recharged New AA NiMH	1.417 VDC
New Alkaline AA Cell	1.602 VDC
New Lithium Ion AA Cell	1.765 VDC

These may appear to be only slight differences, but when these cells are placed in an 8-10 pack, it makes for a large difference in battery output voltage. Does it also translate into a longer operating time under load? Hopefully, but more sophisticated testing and further research under actual field conditions is needed to establish that data. The question raises is, until a better solution than NiMH comes along, should we even bother with rechargeable cells at all? Please send me your observations and input: [k8ocel@arrl.net](mailto:k8ocel@arrl.net).

\*Radio Shack® Digital Multimeter with PC Interface Catalog Number 22-812



**The Amateur Radio Crossword Puzzler**



**Across**

- 1. Cause of picket-fencing
- 8. Satellite navigation
- 12. FCC proposal
- 13. Designator used for diodes
- 14. The closest planet
- 16. French friend
- 18. Annual book of astronomical events
- 19. A honcho
- 20. Rises and sets
- 21. To exist
- 22. Cools beverages
- 24. Someone that stays up late at night
- 25. Space shuttle (abbr)
- 28. Additional
- 29. Not quite X-rays (abbr)
- 31. The biggest wins the contest
- 33. Solder component being phased out (chemical symbol)
- 35. Looks for little green men (abbr)
- 36. Unusual or unexpected
- 37. Measure of RF output (abbr)
- 39. Where ambulances go (abbr)
- 40. To possess
- 42. Above AF (abbr)
- 43. Directional antenna
- 45. Home of the Great Basin (postal code)
- 47. To keep quiet
- 48. These have tails and comas
- 50. Type of thyristor
- 52. One of the types of digital filters

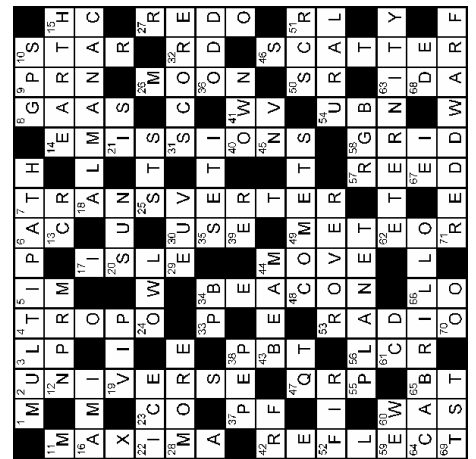
and small, old star (two words)

**Down**

- 2. Contains everything
- 3. Opposite direction from SP
- 4. Propagation through the atmosphere
- 5. Short message system on the Internet
- 6. Home electricity
- 7. Converts one band to another
- 8. Material used for microwave semiconductors
- 9. Printer or printer file (abbr)
- 10. Point of light
- 11. Opposite of the current solar cycle status
- 14. Transmitted signals
- 15. South American country on the equator (prefix)
- 17. Land surrounded by water
- 23. Home to Pike's Peak (postal code)
- 26. Source of all things lunar
- 27. Try, try again
- 30. Consume or apply
- 32. Opposite of WR
- 34. Transmits to test propagation
- 37. Measure of reactive vs real power (abbr)
- 38. Shifts a received channel (abbr)
- 41. Home to one of the National Quiet Zones (postal code)
- 42. Bounce off of

- 53. Mobile station
- 54. Mountains that separate Europe from Asia
- 55. Pluto is no longer one
- 57. Video standard
- 59. Direction of lines of latitude
- 61. Non-volatile data storage media
- 62. The longest time
- 64. Contest log submission format
- 67. Multiply these to get power
- 68. CW for "from"
- 69. Exercise or measure (abbr)
- 70. Self-policing representative
- 71. Comedy series
- 44. QSY to another band
- 46. Bounce off in all directions
- 47. Very low power (abbr)
- 49. Leaves an ionized trail
- 50. Simple type of flip-flop
- 51. Resistance of an inductor (abbr)
- 53. What we like to play with
- 54. The three types of logging errors (abbr)
- 56. The report that contains logging errors (abbr)
- 57. Fast relay
- 58. Squares exchanged by VHFers
- 60. Popular first award (abbr)
- 63. Created the first computer (first name)
- 65. CW dash
- 66. One of the signals input to a mixer

**Solution to this month's Puzzler**



# 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 June 2008

**1700 Fellowship**

**1730 Meeting**

Rockwell Collins Cafeteria

**NEXT SIGNALS DEADLINE:**

**7 July 2008**