



AARC COVER

Bulletin of Austin Amateur Radio Clubs
 Austin Amateur Radio Club
 Austin Amateur Television Club
 Austin Repeater Organization

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December 2007

Happy Holidays!

Issue 12-2007

Colossus Cracks German Code 60 Years On - But It's Not The First!

National Museum of Computing's Cipher Challenge Won By German Amateur!
 Colossus, the Second World War computer, today successfully deciphered a coded message transmitted from Germany, recapturing the drama and excitement of Bletchley Park's code-breaking legacy. Experts using the newly-rebuilt machine at the National Museum of Computing in Bletchley Park, Buckinghamshire, managed to beat a number of rival code breakers using modern-day computers. But, more than 60 years on from when it helped secure the Allied victory in the war, today's Colossus team had to doff their caps to an amateur enthusiast from Germany. Joachim Schueth, a computer enthusiast from Bonn, was first to crack the message using a program he wrote specifically for the National Museum of Computing Cipher Challenge. Andy Clark, a director of the National Museum of Computing said: "Colossus has managed to crack the Germans' code just like the old days -- although thankfully today's message was entirely peaceful in content. Mr. Schueth has done fantastically well to decipher the messages first. We are delighted and most impressed by his work."
 The Cipher Challenge began yesterday when encrypted messages were transmitted from the Heinz Nixdorf Museum in Paderborn after being encrypted using the Lorenz SZ42 cipher, the same machine used by the German high command in war time. Meanwhile at Bletchley Park Block H, the computer nerve centre used by Churchill's intelligence operations during the war, a Colossus Mark II machine, which took 14 years to rebuild, clicked and whirred into action. Adverse atmospheric conditions produced by the sun spot cycle interfered with Bletchley Park's reception of the Paderborn transmissions on Thursday. "While Mr. Schueth was working his way to success, the Colossus team at Bletchley was struggling to get a signal – reminiscent of certain modern-day mobile phone networks," said Mr. Clark.

(Continued on page 4)

Periodic Events

Sun	7:30 p.m.	Travis ARES net	147.36 MHz + (131.8)
Sun	8:00 p.m.	Travis ARES Packet	145.73 MHz -
Sun	8:00 p.m.	Williamson ARES net	146.64 MHz - (162.2)
Sun	9:00 p.m.	ARO Swapnet	146.94 MHz -
Sun	(After Swapnet)	Newsline	146.94 MHz -
Tues.	7:30 p.m.	Hays ARES net **NEW FREQ!**	444.150 + (114.8)***
Tues.	8:00 p.m.	Bastrop ARES Net	443.750 + (114.8)
Wed	11:30 a.m.	Ham Social Luncheon, Jim's	146.94 MHz -
Thu	9:00 p.m.	2m SSB Net	144.250 (USB)
Thu	11:30 a.m.	Lunch, Waterloo Ice House	444.1 MHz+
Fri	8:00 p.m.	6m SSB Net	50.230(texasvhf.org/)
Sat	7:00 - 8:30a.m.	Breakfast @ Waterloo Ice House	444.1 MHz +
Sat	9:00 a.m.	Chapter 67 QCWA QSO Net.	3.920 MHz LSB
Daily	6:30 p.m.	Central Texas Traffic Net	147.14MHz+

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Ham Radio Exams Results

The following are the results of the ARRL VE Test Session held on November 3rd, 2007 in the Hancock Building of the LCRA General Office Complex:

Technician Class Licenses Processed

Neil H. Fixter, KE5RHW Timothy M. Scoggins, KE5RHV

General Class License Processed

Ellis M. Titcher, KD5UBB

Examiners Participating in this Test Session

Milt Cram, W8NUE Curt Goodson, W4QBU Larry Gunter, WB5BEK
Joe Makeever, W5HS Tom Nevue, W2MN Joe Thiel, N5SMN

Next Two ARRL VE Test Sessions

December 1st - LCRA Hancock Building, Board Conference Room
January 5th, 2008 - LCRA Hancock Building, Board Conference Room
TNX ES 73 DE W5HS

Joe
NOTE:The Austin Amateur Radio Club ARRL VEC amateur radio examinations will no longer be held in the LCRA Colorado Room. The location for the remainder of the monthly tests in 2007 will be held at the following location:

LCRA General Office Complex
Hancock Building, First Floor Main Entrance, Board Conference Room
3700 Lake Austin Boulevard
Austin, TX78703

Go along Lake Austin Boulevard to the low-lying limestone main entrance wall to the General Office Complex driveway on the east side of the road. It will show "3700" and "LCRA" on it. Go up the driveway to the Visitors' parking spaces (both on the south side and the north side of the driveway. Find a parking spot, then go up the main entrance walkway to the north. Signs along the walkway will direct you to the Hancock Building. Go up the stairs and into the front entrance of the Hancock Building. You will be directed to the test room location from someone near the front entrance.

TNX ES 73 DE W5HS
Joe Makeever

11-17-2007

The South Austin W5YI VE team heartily congratulates all of the following people who earned new or upgraded amateur radio licenses at our November 17th session:

Extra Class – none

General Class – Vickie B. Amidon, KE5LOM Deborah L. Riverstar, KE5RDV
David W. Wright –new-

Technician Class (all new) – Wolfgang R. Ballich Tony S. Clevenger
Judith T. Cooper James R. Gage Lauren H. Gage Christopher T. Leonard

Our administering volunteer examiners were:

Hugh Brown, NT5O Lloyd Goehring, Jr., N5TO
John Fisher, K5JHF Jim Greenwood, AB5EK

Jimmy Mercer, N5WDH

Sometimes, change is good. Sometimes, un-change is better. Since the renovations to the building are complete, starting November 17, 2007, we will move our regularly scheduled amateur radio exam sessions back to Fleck Hall, room 106 on the campus of St. Edward's University, 3001 South Congress Ave. in Austin, Texas 78704. This will be a *permanent* move from our Moody Hall location. Fleck Hall is easier to locate for those not familiar with the St. Edward's campus and parking is *much* easier to find near the building.

Our next amateur radio exam session will start at 2 PM on December 8, 2007 in room 106 of Fleck Hall on the campus of St. Edward's University.

For additional information regarding our amateur radio examination sessions, please contact Jim, AB5EK at (512) 327-6184 or by e-mail to hamradioexams@hotmail.com or visit our web page at <http://texashams.org/w5yi-austin/>

Austin Amateur Radio Club, Inc., PO BOX 4739, AUSTIN TX 78765-4739, Web site: <http://www.austinhams.org>

President	Don Dudley	AC5YK	340-0778	ac5yk@yahoo.com
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ARRL Public Information Officer	Lee Cooper	W5LHC	424 5491	w5lhc@arrl.net

Please contact a club officer, attend a meeting, mail us to join the organization, you can also join or renew online.

The Austin Amateur Radio Club, Inc. (AARC) has annual membership dues of \$20.00 per person or \$30.00 per family. AARC maintains the following repeaters:

FREQUENCY	AUTOPATCH	USE
146.780	Yes	General
146.880	Yes	General
146.940	No	Most popular, WX, Swapnet & Newslite
224.800	No	
444.100	No	

Persons using the repeaters are asked to join the club to help support these valuable resources. To use the autopatch, announce your call sign, press * and dial the phone number then release the PTT. When finished, press # to hang up the phone. Dial 911 (no * needed) for emergency services.

AARCOVER Information

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Viewpoints expressed in the AARCOVER do not necessarily reflect those of any club, or of its members, directors, or officers.

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Members and other readers are encouraged to submit material for publication. Call Mitch London, if mailed submissions are

required. Electronic files are encouraged! Submissions may be edited for publication. **Deadline is the 20th of the month.**

Material may be used in a later issue. Unless otherwise noted, permission is granted to reprint AARCOVER articles, provided you credit the author and the AARCOVER.

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For Changes in your ADDRESS, PHONE NUMBER or CALL SIGN:

See Jay Hoffman, WA5OST (512) 388-4404 jayhoffman@yahoo.com

Jay handles all changes for AARCOVER mailing labels & membership information .

AARC OFFICERS ELECTED FOR 2008

At the regular monthly meeting in November, nominations ceased for officers and elections were held. Congratulations to our slate of officers for 2008! They are...

President: Don Dudley, AC5YK
Vice-President: Lee Cooper, W5LHC
Treasurer: Jay Hoffman, KA5OST
Secretary: Alan Russell, KE5DTR

(Continued from page 1)

Verifiable cipher text was eventually obtained on Thursday evening and transferred to punched paper tape for Colossus. That text was loaded on Colossus at 0855 today (Fri) and the machine started. By 1315 it had cracked the hardest of the cipher challenge messages, which had content relating to the Heinz Nixdorf Museum in Paderborn.

Andy Clark said: "The official run time for Colossus cracking the code was three hours and 35 minutes - we had 45 minutes 'injury time' when we had to replace a valve!"

The Cipher Challenge continued tonight for many amateur code breakers still battling to unravel the messages which are now available on the National Museum of Computing website www.tnmoc.org

The 10 original Colossus machines, which were located at Bletchley Park, enabled code breakers to decrypt top-secret communications sent by German high command, leading to the war being shortened by many months and saving thousands of lives.

Owing to the secrecy surrounding Colossus at the time, the dismantling of the ten operating machines at Bletchley was ordered immediately after the war. Another two which were not operational at Bletchley were sent elsewhere and dismantled in the 1960s.

Over the past 14 years Tony Sale, of the National Museum of Computing, has led a team rebuilding a Colossus computer using fragments of design plans and photographs and by gleaning information from those involved in the creation of the original.

"On the strength of today's performance, Colossus is as good as it was six decades ago," said Tony Sale. "We are delighted to have produced a fitting tribute to the people who worked at Bletchley Park and whose brainpower devised these fantastic machines which broke these ciphers and shortened the war by many months."

"The rebuild was extremely difficult because a lack of information, but the actual construction and its operation today was a much easier task. Everything went smoothly until a thyatron valve blew at a very inopportune moment and delayed us by just over half an hour."

Andy Clark concluded: "We are full of admiration for Mr. Schueth's achievement and look forward to inviting him to visit Colossus to receive a very special prize. He wrote a program that was highly optimized for the challenge and he obviously designed it very well. We're really pleased and very impressed. It highlights the strength of the international community working together. I said if someone could crack the code before Colossus I would buy them a beer, so, as a man of my word, Mr. Schueth, the first round's on me!"

The Cipher Challenge www.tnmoc.org.uk/cipher1.htm

The National Museum of Computing www.tnmoc.org

Bletchley Park www.bletchleypark.co.uk"

What's Up in the World of BPL

Forwarded by Glen Reid, K5FX

Apparently, the City and AE were very disappointed in the results of their test. The significance of the poor test results really becomes apparent when you realize that the test area was only about 7 blocks long and 3 blocks wide. There were 12 BPL nodes required to cover the area and deliver "broadband data" to only 5 water meters, 5 electric meters, 3 IP phones, 4 computers, 2 TV cameras and 1 home security system. The City paid for the test. Pete Collins said it cost approximately \$300,000, or about \$15,000 per IP connection. After several trips to monitor the system, I can tell you that the 2.6 to 30 MHz spectrum was covered with BPL noise except the ham bands and WWV, where it was essentially imperceptible. There were a few very, very weak BPL signals in the 15 and 10 meter bands.

PowerGrid claims that the BPL was notched -40 db in the ham bands. I suggested that "Texas University" would probably want WWV protected also, which they did, at least at 10 MHz. I heard that the LSU physics department had requested the WWV protection on their test in Baton Rouge. I could never document that they were notching the NTIA "protected" aeronautical bands. If they were I could not hear it on my receiver. PowerGrid did the RF ingress testing themselves and said there was no interference. I was not present for that test and cannot verify the methodology or the results. I view that as BPL's problem.

I think the Austin test proves two things:

1. A properly installed, maintained and operated BPL with at least -40 db notches can operate with out ham band RFI. There is simply no excuse for the "mess in Manassas" situations.
2. When operated within the FCC limits and proper notches in the ham bands, there is just not enough band width available to deliver real "broadband" speeds.

It just confirms what many folks have been saying about BPL, that is it is just not a very effective or efficient technology for broadband data.

AARC Meeting Minutes: November 6, 2007

Meeting called to order: 7:09pm by President Don Dudley, AC5YK.

The meeting's agenda was shown, and "housekeeping" announcements were made.

Visitors: John Causey, KE5OLR.

New Members: Dwayne Voth, KX5DJV.

Minutes: Last meetings minutes approved as written in the AARCOVER.

OFFICER REPORTS:

President: talked up the Radio Roundup and how it looks like the club may actual make some money on this year's event. Also, 2008 Dues and a membership drive are starting.

Treasurer: reported only estimated amounts, totals were not available by meeting time.

Editor: always looking for articles (submit by 20th each month); Curtis Goodson's, W4QBU, article on cracking wall warts (originally published in the AARCOVER) was published in QST with photos by Mitch London, KD5HCV.

Tech Committee: Stuart Rohre, K5KVH, reported: a movie crew in the area had been looking for ham equipment and hams in general for consulting purposes.

ARES: Roger Wines, W5WIA, reported: response team meeting next week at EOC, the ham classes are going good thanks to the volunteers, no ARES meeting next month but response team meeting still on, and volunteers needed for the trail of lights. Joe Fischer, K5EJL, reported the South Texas Section of ARES has a new Emergency Coordinator.

Other: Stuart Rohre reported the Red Cross needed help unpacking from recent response events; you can call 386-8700 to help. Jay Hoffman, KA5OST, reported the PMBO computer at the EOC failed, and a new computer is being funded and built at no expense to the club (thanks in large part to Jay).

Upcoming Presentations were discussed as shown in the slide show. There will be an attempt to move the monthly meetings to a Waterloo Icehouse for 2008.

The January 2008 meeting will be the 8th (the second Tuesday of the month).

Old Business: more details/discussion/recap on the Radio Roundup, Christmas Party, and raffle. Raffle tickets almost all sold out. Volunteers are needed to help with the Roundup and party. The website has all the details. D-Star discussed, including donated equipment and repeater site(s) determined. Things are moving along, so hams with D-Star equipment are needed to start using and testing the system.

New Business: Officer elections were held. **Results:** President: Don Dudley, AC5YK; Vice-President: Lee Cooper, W5LHC; Treasurer: Jay Hoffman, KA5OST; Secretary: Alan Russell, KE5DTR. (These results were not announced at the meeting due to time.)

Hams of the Month: Ward Silver, N0AX; Dallas Mellichamp, KD4HNX; Ross Snyder, N0GSZ; Lee Cooper, W5LHC; Angela Cooper; Bil Henson, WB5SYS; Bridget King, KE5LOP, and her son, Jerrod; Lori Schmidt, KM5MQ; and Jeff Schmidt, N5MNW.

Slides and discussion of upcoming events: all listed in the AARC Swapnet newsletter or at **www.austinhams.org**.

Announcements: Roger Wines: Lanier HS is looking to start a Ham Class and club. Lee Cooper: Larry Eblen is retiring from the NWS on Dec.1 at the NWS open house event, and members of the club will be there to present him with a certificate.

Meeting Adjourned: 7:55pm

Presentation: Bob Morgan, WB5AOH, on the topic of Household Solar Power.


Austin *5th Annual!*
Radio Round Up
December 7 & 8, 2007

Come join us for the 5th Austin Radio Roundup Dinner Banquet and Swapfest! The Radio Round Up will be held at the Sons of Hermann Mixed Lodge #120, on Decker Lake Road in Austin, Texas Friday December 7th and Saturday December 8th.

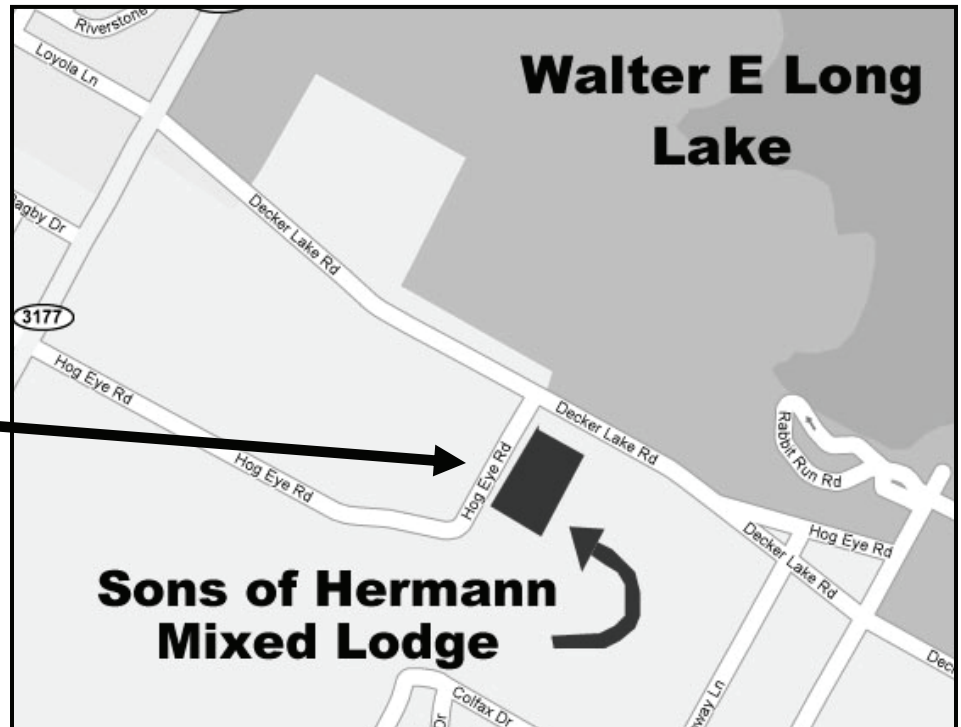
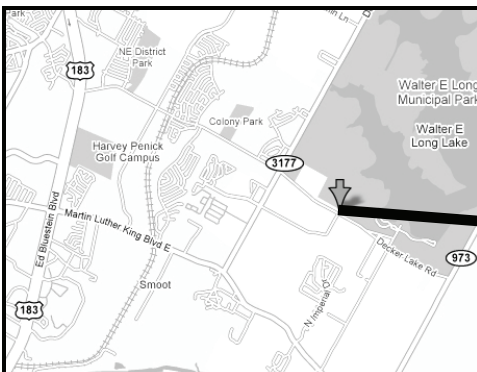
Register Online at www.austinhams.org

Friday Dec. 7th Scheduled Events

Commercial Vendor Set Up 5 - 6pm
 Social Hour From 6 - 7 pm
 Dinner 7 - 9 pm
 Catered Dinner and Music
 Ham Themed Table Top Decorating Contest
 QLF Contest - Sending Morse code with left foot
 Casino Night fun!
 Silent Auction
 Dinner Tickets \$10 per person
 Advance Registration available!

Saturday, Dec. 8th Scheduled Events

Radio Round Up Swapfest
 Entrance Fee \$2 per person
 Doors Open at 8am and runs until 1 pm
 Tables only \$15 (Elex first come first served)
 Tailgating available - \$5 per space
 VE Testing onsite!
 Door Prizes! Commercial Vendors and More!



**Sons of Hermann
 Mixed Lodge #120
 9611 Decker Lake Road
 Austin, Texas 78724**

**Tickets
Sold Out!!!**

**ICOM IC-7000
HF Mobile Radio Raffle**



Join us at the 5th Annual Radio Round Up!!!

Over the WWaves... End of the Year Clearance!!!

A variety of interesting websites submitted by our readers. Here is a wad of goodies!

This information on how to do something in your own home that normally is one in some remote business may help you to finish a construction project that you've just needed a few parts to complete. – Rick Herndon, K5FNI

<http://www.instructables.com/id/ELPFLBN6A9EYJ3I2F0/>

Potentiometer Secrets – Rick Herndon, K5FNI

http://www.geofex.com/Article_Folders/potsecrets/potscret.htm

Introduction to Packet Radio – Stuart Rohre, K5KVH

<http://www.choisser.com/packet/>

This product also deals with distribution of low-voltage, high-current power, using the almost ubiquitous Powerpole (TM) connectors favored by hams.-Rick Herndon, K5FNI

<http://www.reddee2.com/>

Here is a link to how to install the in tank fuel pump filter on Ford products to cure RFI-Stuart Rohre, K5KVH

<http://www.thedieselstop.com/faq/9497faq/tsb/tsb/files/010703.pdf>

This is a link to the Wall Street Journal article about Chuck Adams, now K7FO, the founder of the Nortex QRP club, and friend of AQRN group. – Stuart Rohre, K5KVH

<http://online.wsj.com/public/article/SB119161604206850468.html>

Here's some guides on soldering electronic components. –Rick Herndon, K5FNI

<http://www.muzique.com/schem/solder.txt>

<http://www.aaroncake.net/electronics/solder.htm>

AARC Meeting Info.

ARL Labs

10000 Burnet Rd. North of 183

Officers Meeting 6:00 PM

No officers meeting this month

Regular Business Meeting

December 7 & 8 - It the annual holiday party and radio round up. See page 6 for details!

***NOTE: January meeting will be Jan. 8th due to New Years Day!

2007 Upcoming Amateur Exams

ARRL VEC- December 1st & January 5th 9a.m. at LCRA Complex 3700 Lake Austin Blvd. ***See page 2 for location change. Contact Joe Makeever, W5HS (345-0800) or Joe Thiel, N5SMN (832-0450) for info. \$14 fee.

W5YI VEC- December 8th *Special Date* 2p.m. in room 106, Fleck Hall, St. Edwards University. Contact Jim Greenwood, AB5EK@arrl.net, (327-6184)

***See page 2 for location change.

<http://texasparadise.com/w5yi-austin> for more info.

*******DUES ARE DUE!!!*******

Dues must be paid by April 15, to be included in the annual Roster. Contact Jay Hoffman, KA5OST (512) 388-4404 or jayhoffman@yahoo.com or you can pay dues online at... www.austinhams.org/join

2007 Calendar of Events

Dec 7 AARC Christmas Party & Radio RoundUp

setup Sons of Hermann Mixed Lodge #120
9611 Decker Lake Road Austin, TX 78724

www.AustinHams.org

Dec 8 Austin Radio RoundUp Sons of Hermann Mixed Lodge #120 9611 Decker Lake Road Austin, TX 78724 www.AustinHams.org

Jan 12 San Antonio Radio Club's Amateur Radio Fiesta 2008" 8AM-2:00PM NEW location: Schertz Knights of Columbus Hall, 509 Schertz Parkway, Schertz TX

Admission \$3 advance, \$4 at the door (Free admission for children <age 12) Dealer Tables \$12 each Flea Market Tables \$7 advance \$8 at door Tailgate Spaces \$5 each in advance \$6 at door <http://w5sc.org/>

Dec.	Jan.	Austin Meetings/Happenings
++	8*	AARC Meeting ARL Auditorium** 7:00 p.m.
8	12	Austin QRP, Alvin's Sandwich Shop 11:00 a.m.
11	9	ARES Training -LCRA Hancock Bldg 6:30 p.m.
11	9	High Speed Multimedia SIG Red Cross 7:00 p.m.
18	15	ATV Club Mtg. Mangia Pizza 6:30 p.m.
15	19	QCWA Denny's on Burnet Rd. 2:00 p.m.
24	28	Travis Co. REACT Denny's on Burnet 7:00 p.m.
25	29	Travis County A.R.E.S., ARL Aud. 7:00 p.m.
26	30	Packet Set-up Lab @ Red Cross* 7:00 p.m.

++No meeting this month, Christmas Party/ Round Up See Page 6

* January meeting moved back one month due to New Years Day

**AARC Business Meeting is at ARL Labs 10000 Burnet Rd.

Return Service Requested
December 2007
Austin, TX 78765-4739
PO Box 4739
Austin Amateur Radio Club
AARCOVER